PUBLICLY FILED VERSION

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VERSUS TECHNOLOGY, INC.,	)	
	)	
Plaintiff,	)	
v.	)	Civil Action No. 04-1231 (SLR)
	)	
RADIANSE, INC.	)	
	)	
Defendant.	)	

RADIANSE INC.'S MOTION FOR LEAVE TO FILE SUPPLEMENTAL MEMORANDUM IN SUPPORT OF RADIANSE'S MOTIONS FOR SUMMARY JUDGMENT AND TO DISMISS FOR LACK OF STANDING

Defendant Radianse, Inc. ("Radianse") hereby moves for leave to file a supplemental memorandum in support of its pending motions for summary judgment and to dismiss for lack of standing in the form attached hereto as Exhibit 1.

The grounds for this motion are as follows:

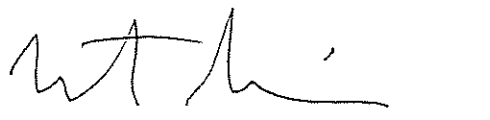
1. Radianse took the deposition of Walter Leipold, plaintiff's sole expert witness, on February 9, 2006. That deposition had been postponed at the request of plaintiff. The transcript of the Leipold deposition was provided to the parties on February 13, 2006.
2. The deposition testimony of Mr. Leipold bears directly on Radianse's pending motions to dismiss and for summary judgment, because it corroborates the factual statements made by Radianse in support of those motions.
3. The transcript of the Leipold deposition, attached to Radianse's Supplemental Memorandum, will be of assistance to this Court in deciding the pending motions.

4. Radianse's Supplemental Memorandum points out relevant portions of Mr. Leipold's testimony for the Court's convenience.

5. The present motion causes no prejudice to plaintiff.

WHEREFORE, defendant Radianse, Inc. respectfully requests this Court to grant its motion to enter an order in the form attached hereto.

Respectfully submitted,



Josy W. Ingersoll (No. 1088)
John W. Shaw (No. 3362)
Elena C. Norman (No. 4780)
Monté T. Squire (No. 4764)
YOUNG CONAWAY STARGATT & TAYLOR, LLP
The Brandywine Building
1000 West Street, 17th Floor
Wilmington, Delaware 19899-0391
(302) 571-6600
msquire@ycst.com

Attorneys for Defendant Radianse, Inc.

Of Counsel:

Sibley P. Reppert
William A. Scofield, Jr.
LAHIVE & COCKFIELD
28 State Street
Boston, MA 02109-1784
(617) 227-7400

Dated: February 15, 2006

PUBLICLY FILED VERSION

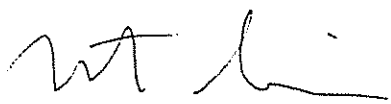
CERTIFICATE OF SERVICE

I, Montè T. Squire, Esquire hereby certify that on February 15, 2006, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to the following counsel of record:

George Pazuniak, Esquire
Connolly Bove Lodge & Hutz LLP
The Nemours Building
1007 N. Orange Street
Wilmington, DE 19801

I further certify that on February 15, 2006, I caused a copy of the foregoing document to be served by hand delivery on the above-listed counsel of record.

YOUNG CONAWAY STARGATT & TAYLOR, LLP



Montè T. Squire (No. 4764)
The Brandywine Building
1000 West Street, 17th Floor
Wilmington, Delaware 19801
(302) 571-6600
msquire@ycst.com

Attorneys for Radianse, Inc.

PUBLICLY FILED VERSION

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VERSUS TECHNOLOGY, INC.,	)	
	)	
Plaintiff,	)	
v.	)	Civil Action No. 04-1231 (SLR)
	)	
RADIANSE, INC.	)	
	)	
Defendant.	)	

ORDER

At Wilmington this ___ day of _____, 2006, having considered defendant Radianse, Inc.'s Motion For Leave To File Supplemental Memorandum In Support Of Radianse's Motion For Summary Judgment And To Dismiss For Lack Of Standing, and the parties' arguments in support of and opposition to the motion,

IT IS HEREBY ORDERED that defendant, Radianse, Inc.'s Motion For Leave To File Supplemental Memorandum In Support Of Radianse's Motion For Summary Judgment And To Dismiss For Lack Of Standing is GRANTED.

_____
United States District Judge

PUBLICLY FILED VERSION

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VERSUS TECHNOLOGY, INC.,	)	
	)	
Plaintiff,	)	
v.	)	Civil Action No. 04-1231 (SLR)
	)	
RADIANSE, INC.	)	
	)	
Defendant.	)	

LOCAL RULE 7.1.1 DISCLOSURE

I, Monté T. Squire, Esquire, hereby certify pursuant to Local Rule 7.1.1, that counsel for Defendant Radianse, Inc. requested the assent and has made reasonable efforts to reach agreement with counsel for Versus to the matters set forth in the present motion, but that counsel for Plaintiff Versus Technology, Inc. declined to assent.

Josy W. Ingersoll (No. 1088)
John W. Shaw (No. 3362)
Elena C. Norman (No. 4780)
Monté T. Squire (No. 4764)
YOUNG CONAWAY STARGATT & TAYLOR, LLP
The Brandywine Building
1000 West Street, 17th Floor
Wilmington, Delaware 19899-0391
(302) 571-6600
msquire@ycst.com

Attorneys for Defendant Radianse, Inc.

Of Counsel:

Sibley P. Reppert
William A. Scofield, Jr.
LAHIVE & COCKFIELD
28 State Street
Boston, MA 02109-1784
(617) 227-7400

Dated: February 15, 2006

PUBLICLY FILED VERSION

Exhibit 1

PUBLICLY FILED VERSION

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VERSUS TECHNOLOGY, INC., Plaintiff, v. RADIANSE, INC. Defendant.	)	Civil Action No. 04-1231 (SLR)

DEFENDANT RADIANSE INC.'S SUPPLEMENTAL MEMORANDUM IN SUPPORT OF RADIANSE'S MOTIONS FOR SUMMARY JUDGMENT AND TO DISMISS FOR LACK OF STANDING

Josy W. Ingersoll (No. 1088)
John W. Shaw (No. 3362)
Elena C. Norman (No. 4780)
Monté T. Squire (No. 4764)
YOUNG CONAWAY STARGATT & TAYLOR, LLP
The Brandywine Building
1000 West Street, 17th Floor
Wilmington, Delaware 19899-0391
(302) 571-6600
msquire@ycst.com

Attorneys for Defendant Radianse, Inc.

Of Counsel:

Sibley P. Reppert
William A. Scofield, Jr.
LAHIVE & COCKFIELD
28 State Street
Boston, MA 02109-1784
(617) 227-7400

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PUBLICLY FILED VERSION

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PUBLICLY FILED VERSION

NATURE AND STAGE OF THE PROCEEDING

Radianse, Inc. ("Radianse") seeks leave to file the present Supplemental Memorandum to bring to the Court's attention the testimony of Walter Leipold ("Leipold"), the sole expert witness for Versus Technology, Inc. ("Versus").

SUMMARY OF ARGUMENT

Leipold's testimony bears directly on two pending motions, Radianse's Motion for Summary Judgment and its Consolidated Motion to Dismiss for Lack of Standing. At Versus's request, Leipold's deposition was postponed until February 9, 2006, and the transcript was not available until February 13, 2006. Leipold's deposition testimony strongly corroborates Radianse's factual assertions supporting its pending motions. Particularly relevant portions of Leipold's testimony are highlighted in the copy of this transcript attached hereto as Exhibit A.

ARGUMENT

A. LEIPOLD'S TESTIMONY BEARING ON RADIANSE'S MOTION FOR SUMMARY JUDGMENT

Leipold testified that he spent four days reviewing the escrowed source code from the Radianse system (Tr. 4, 8, 9, 12, 13). His testimony with respect to the subject matter of numerous statements of fact asserted by Radianse's in support of its Motion for Summary Judgment of Non-Infringement[1] is summarized below in italics.

1. Radianse manufactures and sells the Radianse Indoor Positioning System (IPS). (Tessier Affidavit, ¶ 3).

No comment by Leipold. (Tr. 72).

[1]Section A of Radianse's Statement of Material Facts As To Which There Is No Genuine Issue is attached hereto as Exhibit B. This Statement is taken from the Opening Brief In Support of Radianse's Motion For Summary Judgment of Non-Infringement and Patent Invalidity.

2. The Radianse IPS accurately and continuously tracks the location of assets or people in virtually any indoor environment. The Radianse IPS is based on a proprietary technique developed by Radianse to identify and determine the location of objects indoors. The Radianse IPS is comprised of four parts – a small, inexpensive, battery-powered transmitter called an ID Tag, a receiving unit called a Receiver, a wired or wireless network, and application software. (Tessier Affidavit, ¶ 5).

No comment by Leipold. (Tr. 72).

3. ID Tags are small devices that transmit unique identification codes and status information by means of radio frequency (RF) transmissions. These ID tags are worn by individuals or attached to assets to be tracked. (Tessier Affidavit, ¶ 6).

Leipold agrees. (Tr. 13, ln. 20 – 13, ln. 2; 36, ln. 22 – 37, ln. 9; 74, ln. 11-19).

4. RF transmissions have different physical properties and characteristics from transmissions that are "light based" such as IR transmissions. RF transmissions are of a different wavelength than IR transmissions. RF transmissions are not blocked by opaque objects such as walls. IR and other light based transmissions are blocked by opaque objects such as walls. (Tessier Affidavit, ¶ 7).

Leipold agrees. (Tr. 75, ln. 8 – 77, ln. 20).

5. ID Tags using RF transmitters to transmit unique tag identifying codes are less expensive than ID Tags using IR transmitters, because they use less energy and consequently cause less drain on batteries. (Tessier Affidavit, ¶ 8).

No comment by Leipold. (Tr. 78, ln. 4-7).

6. Signals from the ID Tags are received by Receivers. Receivers are placed at various locations around a facility and connect directly to the facility's network. Receivers

process the signals received from the ID Tags then send the data to a PC running Radianse software. (Tessier Affidavit, ¶ 9).

Leipold agrees. (Tr. 78, ln. 9-13).

7. The Radianse software contains a proprietary algorithm to identify and determine the location of ID Tags, which it then makes available through a web interface, sends to existing customer databases/applications, or sends on to other value-added applications via XML. (Tessier Affidavit, ¶ 10).

No comment by Leipold. (Tr. 78, ln. 12-13).

8. In the Radianse IPS, ID Tags are identified by signals that are transmitted in the form of RF packets that are sent as 80 bits of Manchester encoded data. In particular, each RF packet includes a 32 bit unique identification of the ID Tag. (Tessier Affidavit, ¶ 11).

Leipold agrees. (Tr. 78, ln. 20).

9. In addition to providing unique identification information for the ID Tag, the RF signal transmitted by the ID Tag in the Radianse constitutes the primary information used by the Radianse IPS software to locate the ID Tag. (Tessier Affidavit, ¶ 12).

Q. For purposes of the operation of this indoor positioning system, in order for the system to determine the location of a specific tag, it has to receive the RF signal from that tag; isn't that correct? [Objection omitted]

A. That is correct.

Q. And if it receives just the IR signal but not the RF signal, the indoor positioning system would not be able to locate a specific tag? [Objection omitted]

A. Yes, that's correct. [Tr. 16, ln. 3-16].

Q. Now, if no RF is received, can IR be received by the system?

A. ***No. The co-processor won't even listen, won't even transmit a packet to the Net 50 processor if it doesn't have an RF signal. [Tr. 28, ln. 7-17].***

10. The ID Tags in the Radianse IPS do not transmit identification information by means of IR. (Tessier Affidavit, ¶ 13). The Radianse System does not generate a light based signal that includes a unique identifying code. (Sims Non-Infringement Report, ¶ 21).

Leipold does not disagree. (Tr. 80, ln. 60).

11. The Radianse IPS does not determine the identification of ID Tags by means of IR transmissions. (Tessier Affidavit, ¶ 14).

Leipold does not disagree. (Tr. 80, ln. 60).

12. The RF transmissions from ID Tags in the Radianse IPS are followed by the transmission of a short IR signature in standard industry format that does not contain identification information

Leipold agrees. (Tr. 14, ln. 20 – 15, ln. 2; 36, ln. 22 – 37, ln. 9)

and that is not unique to Radianse.

Leipold has no knowledge. (Tr. 80, ln. 23).

The IR signal can only be received if a valid RF packet is received.

Leipold agrees. (Tr. 28, ln 9; 81, ln. 9-12).

The IR signal has no relevance or meaning by itself. (Tessier Affidavit, ¶ 15) (Sims Non-Infringement Report, ¶ 21).

Leipold agrees. (Tr. 81, ln. 13 – 17).

13. The IR signal transmitted by the ID Tags in the Radianse IPS does not identify the ID Tag. (Tessier Affidavit, ¶ 16).

Leipold agrees. (Tr. 81, ln. 18-24).

14. The RF transmissions from ID Tags in the Radianse IPS provide the primary means by which the locations of the ID Tags are calculated by Radianse. The IR signals

transmitted by the Radianse ID Tags provide supplementary location information. (Tessier Affidavit, ¶ 17).

Leipold agrees the Radianse IPS will give a location for a tag using RF without IR, although with less precision than if an IR signal is also received. (Tr. 82, ln. 4-17).

15. The Radianse IPS requires the RF signal to locate and identify ID Tags, but does not require the IR signal either to identify or locate ID Tags. (Tessier Affidavit, ¶ 18).

Leipold agrees the Radianse IPS will give a location for a tag using RF without IR, although with less precision than if an IR signal is also received. (Tr. 82, ln. 4-17).

16. In the Radianse IPS, Receivers are deployed with overlapping areas of signal reception.

Leipold agrees. (Tr. 26, ln. 11 – 27, ln. 10; 82, ln. 24 – 83, ln. 4)).

RF transmissions from an ID Tag are received by multiple Receivers.

"The software was written with that in mind, yes." (Tr. 83, ln. 5-7).

The received strength (RSSI) from an ID Tag at a Receiver is proportional to the distance of the ID Tag from the Receiver.

Leipold agrees. (Tr. 83, ln. 8-12).

The RSSI value from an ID Tag is the primary means by which the locations of the ID Tags are determined by the Radianse system. (Tessier Affidavit, ¶ 19).

See Fact 9, supra. Leipold agrees the Radianse IPS will give a location for a tag using RF without IR, although with less precision than if an IR signal is also received. (Tr. 82, ln. 4-17).

The use of ID Tags that transmit the unique TAG ID by means of RF enable multiple receivers in different rooms to receive a given tag transmission and enable Radianse to determine the location of the tag by means of RSSI.

Leipold agrees. (Tr. 26, ln. 11 – 27, ln. 10; 84, ln. 7 - 23).

Such technology cannot be used where the tags transmit only IR signals. (Tessier Affidavit, ¶ 20).

Leipold agrees, although one could use received signal strength of an IR signal within the confines of a single room. (Tr. 84, ln. 24 – 85, ln. 14)

17. Radianse's receivers are not sited so that the signal from a tag is received by only one receiver; Radianse does not use "area detection."

"RSSI is more likely to be useful when you have an overlap." (Tr. 87, ln. 19). Leipold can only speculate how Radianse sites its receivers. (Tr. 86, ln. 16).

By using RF transmissions from ID Tags containing the unique Tag ID and RSSI, the Radianse IPS is able to identify and locate tags that could not be identified and located by the use of IR transmissions from tags containing the unique Tag ID. (Tessier Affidavit, ¶ 21).

Leipold agrees. (Tr. 88, ln. 9 – 17).

Radianse's system does not deploy its receivers such that one receiver is associated with each area, and does not use receivers that receive transmissions from assigned areas of a predetermined size. (Sims Non-Infringement Report, ¶s 23, 37).

Leipold does not know how Radianse deploys its receivers, is not an expert in patents, and has not read the file history. (Tr. 6. ;n. 7; 59, ln. 23 – 60, ln. 4; 86. ln. 16).

18. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver.

Leipold agrees. (Tr. 90, ln. 4).

Radianse does not use limited area and extended area receivers. Reception of Tag signals at a Receiver is not limited to an assigned area. (Tessier Affidavit, ¶ 22).

Leipold is aware these terms may have "constraints on their meaning because of the prosecution history of the patent." (Tr. 90, ln. 19 – 21).

19. Radianse Receivers transmit data packets to the Radianse Server on a regular, pre-determined schedule. Receivers send a packet to the Server independent of whether or not the Receiver has received signals from ID Tags. Transmission from a Receiver is independent of ID Tag transmission and Server operations. Radianse's Receivers do not provide output resulting from or triggered by the receipt of a Tag transmission. (Tessier Affidavit, ¶ 23) (Sims Non-Infringement Report, ¶ 39).

Leipold agrees. The Radianse receiver transmits every ten seconds, unless there is a button press. It transmits even if it does not have anything in the buffer where it stores tag messages to send along to the server. The Radianse receiver does not wait to receive a tag transmission before it sends out its scheduled transmission to the server. (Tr. 21, ln. 10 – 22, ln. 4; 90, ln. 22 – 92 – ln. 17; 91' ln. 13 – 23).

21. The Radianse Server does not scan Receivers for information and the Receivers do not send packets in response to receiving a signal from an ID Tag. Rather, the Radianse system pushes information so that the processor need not monitor the receiver.

Leipold agrees. (Tr. 30, ln. 14 – 21; 94, ln. 8-18).

23. The Radianse Server does not accumulate a badge count for each accumulated area. (Tessier Affidavit, ¶ 27) (Sims Non-Infringement Report, ¶ 29).

Leipold agrees. (Tr. 98, ln. 10 – 13).

B. LEIPOLD'S TESTIMONY SUPPORTS RADIANSE'S MOTION TO DISMISS

The testimony of Versus's expert provides factual support for the second basis on which Radianse moves to dismiss for lack of standing Versus's claims for infringement of the '195 and '791 patents that it licensed from PTFM, namely the fact that Radianse's accused IPS is outside the field of use licensed exclusively by PTFM to Versus for a 10-year period. As argued by Radianse in its Consolidated Motion to Dismiss, Radianse's IPS is a "non-infared technology based product" excluded from the exclusive license by Section 1(c) of the PTFM-Versus's

License Agreement, because (1) Radianse uses RF exclusively to identify its ID Tags, and (2) Radianse requires RF, but does not require IR, to locate its ID Tags.

Leipold testified that the Radianse tags contain two separate transmitters, one of which transmits IR signals and the other of which transmits RF signals. The digital identification of the tag is contained in the RF transmission and not in the IR transmission (Tr. 36, ln. 21 - 37, ln. 9.) Leipold's testimony confirms that Radianse uses RF exclusively to identify its ID Tags.

Leipold also testified that, for the Radianse to determine the location of a specific tag, it has to receive an RF signal from that tag. If it received just the IR signal but not the RF signal, Radianse's system would not be able to locate a specific tag. (Tr.16, ln. 3-16). He further explained that, if no RF is received by the Radianse receiver, the IR signal from the ID tag is not received by the system. If one tried to operate the Radianse system only with IR transmissions from the tags, it would not work. (Tr.28, ln. 7-17). Regarding the IR portion of the signal transmitted by the Radiance identification tags, Leipold testified as follows:

> The fact of the matter is that the IR portion of the signal is never used by itself. If it occurs by itself, the Radianse system throws it out. It is part of the signal. They would not transmit if it were not for the RF, because it has no meaning without the RF.

(Tr.38, ln. 23 - 39, ln. 4).

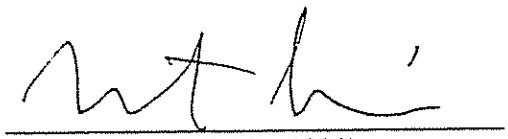
Leipold's testimony establishes that Radianse's IPS is a non-infrared based product. Consequently, it is outside the scope of Versus's exclusive license of the '791 and '195 patents.

CONCLUSION

For the reasons set forth above, Radiance requests that this Court grant its motion for leave to file the present motion, and, upon consideration of the testimony of Mr. Leipold, (1) dismiss Versus's claims of infringement of the '791 and '195 Patents for lack of standing, and (2) enter summary judgment of non-infringement.

PUBLICLY FILED VERSION

Respectfully submitted,



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YOUNG CONAWAY STARGATT & TAYLOR, LLP
The Brandywine Building
1000 West Street, 17th Floor
Wilmington, Delaware 19899-0391
(302) 571-6600
msquire@ycst.com

Attorneys for Radianse, Inc.

Of Counsel:

Sibley P. Reppert
William A. Scofield, Jr.
LAHIVE & COCKFIELD
28 State Street
Boston, MA 02109-1784
(617) 227-7400

Dated: February 15, 2006

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Exhibit A

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VERSUS TECHNOLOGY, INC.,) CONFIDENTIAL
)
Plaintiff,)
) Civil Action
v.) No. 04-1231 (SLR)
)
RADIANSE, INC.,)
)
)
Defendant.)

Deposition of WALTER LEIPOLD taken pursuant to notice at the law offices of Connolly, Bove, Lodge & Hutz, LLP, 1007 Orange Street, Wilmington, Delaware, beginning at 9:00 a.m. on Thursday, February 9, 2006, before Eleanor J. Schwandt, Registered Merit Reporter and Notary Public.

APPEARANCES:

JAMES M. LENNON, ESQ.
CONNOLLY, BOVE, LODGE & HUTZ, LLP
1007 Orange Street
Wilmington, Delaware 19801
for the Plaintiff

SIBLEY P. REPPERT, ESQ.
LAHIVE & COCKFIELD
28 State Street
Boston, Massachusetts 02109-1784
for the Defendant

WILCOX & FETZER
1330 King Street - Wilmington, Delaware 19801
(302) 655-0477

(Leipold Deposition Exhibit 1 was marked for identification.)

WALTER LEIPOLD,

the witness herein, having first been duly sworn on oath, was examined and testified as follows:

EXAMINATION

BY MR. REPPERT:

Q. Please state your name, sir.
A. My name is Walter Leipold.
Q. Where do you reside?
A. I reside in Wilmington, Delaware.
Q. Have you been retained in connection with the lawsuit Versus Technology versus Radianse, Inc.?
A. Yes, I have.
Q. And by whom were you retained?
A. By Connolly, Bove, Lodge & Hutz.
Q. When were you retained?
A. Our project number is dated 22nd June, '05. I guess that week some time.
Q. What is the arrangement you have regarding compensation?
A. We charge by the hour for travel, for site work and for work at our offices.

Q. What is your hourly rate?
A. I'm not exactly sure. Somewhere around 150 an hour for site work. It is in that ballpark.
Q. Have you done anything else besides site work?
A. Work at our offices, preparing the expert report, for instance.
Q. What is your rate for that?
A. It is ten or twenty dollars lower per hour, I believe.
Q. Are you the only one working on this retention?
A. Yes. We have, the president of our company is the project manager, but basically he just signs the billing invoices and stuff.
Q. Have you rendered any bills so far?
A. I'm sure we have.
Q. Do you know what the amount was of those bills?
A. Off the top of my head, no, I don't. I have it on my laptop back in the office.
Q. What is the total amount so far of fees and expenses that you have incurred in connection with this job?
A. Once again, I would have to speculate.
Q. What is your best estimate?

A. I don't have a best estimate. My estimate would

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be on the order of 8,000, 10,000 dollars.
Q. How many hours have you spent so far on the job, this job?
A. Once again, I would have to guess. They were scattered over a period of many months, four hours here, two hours there. Probably, probably around 120. But that could be off by 50 hours either direction.
Q. Of that 120 hours what did you spend that time doing?
A. I spent four full days visiting Iron Mountain, reviewing the escrowed source code from the Radianse system; three or four more days collecting my notes, writing them up, reading Radianse's documents; probably spent on the order of a week and a half preparing the expert report, maybe two weeks. And since the expert report, probably another 20 hours of reviewing documents, preparing for deposition.
Q. Now, there are two documents that you signed, a declaration and a report, correct?
A. That's correct.
Q. Let's start with the report.
Can we mark this Report of Expected Testimony of Walter S. Leipold as Exhibit 2.
(Leipold Deposition Exhibit 2 was marked for

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identification.)
Q. Leipold Number 1 we will show you first. Do you have that in front of you, deposition notice?
A. That's the deposition notice.
Q. Are you appearing pursuant to that notice?
A. Yes, indeed.
Q. And then take a look at Leipold Number 2.
MR. LENNON: It is "Leipold" by the way.
Q. Leipold, sorry.
A. Leipold.
Q. Do you recognize that?
A. Yes, indeed.
Q. Does it correctly state what your qualifications and background are?
A. The attached Exhibit B -- no -- Exhibit A, sorry, which is my CV, accurately states my qualifications.
Q. Do you happen to have any idea how you came to be

retained in this case?
A. No, I do not: My company offers a variety of engineering services, and I assume that Connolly, Bove, Lodge & Hutz had heard of that and talked to one of our salespeople and retained us.
Q. Have you ever been deposed before?
A. No.

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Q. Have you ever been qualified as an expert witness before?
A. No.
Q. Have you ever testified in court?
A. No.
Q. Do you have any expertise about patents?
A. No. I'm not a patent attorney.
Q. Do you have any patents?
A. No.
Q. When you make statements in your report and declaration with respect to the patents, how do you obtain the information that you state regarding what the patents cover?
A. I read the patents. Where I didn't understand what the patent was driving at I consulted with counsel, Mr. Lennon.
Q. And did you come to your conclusion as to how the words of the patents should be construed or defined by the court?
A. For the technical terms I relied on my own technical knowledge. For the exact construction of some of the phrases peculiar to patents I asked Mr. Lennon.
Q. Have you had any experience with indoor locating systems prior to this matter?

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A. I have had experience with indoor data collection systems. They were not wireless except in the case of bar code.
Q. Tell me what those systems were.
A. Bar coding systems for tracking packages through warehouses and on production lines.
Q. Is that shown, is that experience listed here in your Exhibit A?
A. That would be listed on my CV. The CV is clearly very streamlined, given the 27 years it has to to cover in only two pages. That would be covered towards the

bottom of page 1 in the representative systems. I don't know that I mentioned any of those bar coding systems in this CV.
Q. So that's --
A. Actually, the first, the first bullet point there with the "multiple packaging lines in the pharmaceutical plant" had some bar coding and other tracking.
Q. Okay. So other than that you haven't had any experience with indoor locating systems?
A. Well, other systems, other projects like that, yes. But nothing, nothing like the Radianse system.
Q. Had you ever heard of the Radianse system before you were retained?

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A. No.
Q. Had you ever heard of the Versus system before you were retained?
A. No.
Q. Have you examined the Versus system?
A. No.
Q. Please explain to me what you did during those four full days at Iron Mountain.
A. The computer supplied by Radianse contained source code for several versions of their system, the different subsystems of their system, they had different numbers of versions, I think they had five versions of the transmitter and receiver code and two versions of the server side code.
I reviewed it, first an overall view trying to get the shape of the system clear, how many subsystems there were, whether they were congruent with the block diagram that Radianse did supply.
Once I had a feel for where all the pieces were, I read a lot of the code and all of the systems. I think my expert report says that I concentrated mostly on the location resolver on the server side, because that seemed to be the most disputed part of the system.
I read all of the code for the Net 50

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processor on the receiver, because it didn't have many comments and I had to read quite a bit of it to figure out what it was doing.
For the assembly language code for the PIC processors on both the receiver and transmitter I read

all of the comments, and quite a bit of the code where the comments weren't clear, trying to figure out where the hot spots were.

Once I knew where the useful stuff was going on, I zeroed in looking at what was transmitted in particular packets, what was received in particular packets, what processes were responsible for taking the packet information and passing it on to other processes.

Q. Did you ever observe a Radianse system in operation?

A. No, I did not.

Q. You don't have any firsthand knowledge of how the Radianse system would be configured in operation; is that correct?

A. From examining the source code, I can describe a number of different ways it could be configured. It is pretty obvious once you understand how it works.

Q. But you haven't actually observed Radianse systems to determine how they actually are configured; is

that right?

A. The Radianse system can be configured in a large number of ways. They probably haven't even deployed enough of them to have a system configured each possible way. But, no, I have not.

Q. So you have never tested an actual Radianse system, correct?

A. I have not tested it with the transmitters transmitting. I did run the server side software, but they did not supply transmitters or receivers.

Q. You have no information as to how Radianse receivers are located in structures, do you?

A. I don't think that's germane to the operation of the software. But no, I don't know exactly how they have deployed them in any particular hospital.

Q. Is there anything else you did at Iron Mountain besides what you have just described?

A. I believe I just described everything I did. I spent -- I looked at the software a lot of different ways, using a number of tools. I can't think of anything else.

Q. Now, what did you find when you looked at the software a number of ways?

A. Can you clarify that question a little bit?

Q. Did you reach any conclusions as to how the software worked?
MR. LENNON: Objection to form. You can answer.
A. I think I had a pretty good idea of how the software works. I identified all the major processes, all the data going between them, found several shortcomings that if it were my software I certainly would have repaired. Came to conclusions about the overall quality. So --
Q. Can you describe for me how it works, please.
MR. LENNON: Objection to form. You can answer.
A. That's a large question. I will give it a try. Without my block diagram in front of me it might be a little tough.
Q. Do you have a block diagram you would like to refer to?
A. There was one supplied by Radianse. I'll wing it without that.
Q. Well, let me show you, there is one document. Was that a document you referred to by document number in one of your reports?
A. I'm sure we did. Did we?

Once again, I would have to look at it. It was not necessary to describe the software, but it was a good, high-level overview for pointing at when describing to someone.
Q. This?
A. Yes.
MR. REPPERT: We will mark this as Exhibit 3, please. It is called "Radianse System Overview," docket number R011291.
And just while we are on the point, we were going to designate all the exhibits and the deposition as attorney's eyes only pursuant to our convention.
THE WITNESS: We did, in fact, reference that.
MR. REPPERT: I understand that. Just stating that on the record.
(Leipold Deposition Exhibit 3 was marked for identification.)
BY MR. REPPERT:

Q. Just to go back to my question, my broad question, you can refer to this if you want to or not, it is up to you. I just want to repeat my question. At a high level how does the software work, as you understand it based on your observation and investigation?

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A. All right. I guess I should start with the ID tag. The ID tag runs a little PIC microprocessor. The software for the PIC microprocessor was developed by Embed, Incorporated, a very professionally done, very high-quality software.

The operation of the software is that it includes a real-time clock that triggers a transmission every ten seconds. The transmission includes battery level, the number of times each of the two buttons on the ID tag has been pressed, the ID of the tag itself, the ID number. The transmission happens every ten seconds or happens immediately when one of the buttons is pressed.

Once one of the buttons is pressed, the clock is reset so the next transmission is ten seconds after that.

The transmission consists of two parts. It first encodes and transmits an 80-bit packet using RF, and then it transmits a short signature using IR.

The receiver has two processors, a --

Q. Let's stop for a second on the tag. The RF packet, does that include some kind of identification of the tag?

A. Yes, it does.

Q. How does that happen? How does it do that?

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A. It takes the bit sequence that corresponds to the tag ID and sticks it into the middle of the packet.

Q. Now, with reference to the IR signature, what is that? What is an IR signature?

A. The IR signature is a set of pulses with a particular pulse width and spacing that is specific to Radianse tags.

Q. What do you mean by that, "specific to Radianse tags"?

A. Well, it is a sequence that is designed to not be easily mistaken for the signal from a fluorescent light or a television remote or something like that.

Q. How do you know that? How do you know it was

designed for that reason?
A. There are comments in the source code that allude to that. And it is clear that the spacing, the variable spacing of the signals was chosen so that repetitive signals like you get from a power line wouldn't confuse receivers.
Q. Now, do all of the tags transmit the same IR signature?
A. Yes, they do.
Q. Does the IR signature transmitted by the Radianse tags include the unique tag identification?

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A. The five pulses do not directly encode the ID information.
Q. What does the word "directly" mean as you just used it?
A. The directly means that because the IR transmission happens essentially at the same time as the RF, any receiver receiving the IR signal will know which tag it came from.
Q. But the IR signal by itself, if only the IR signal was received, would not give the receiver information as to the unique tag, correct?
MR. LENNON: Objection to form.
A. And that is, in fact, why the receiver ignores --
Q. A nod of your head is fine for me, but --
MR. LENNON: You can answer in any way you want.
Q. -- we are talking about a transcript. So make sure if you have an affirmative answer say yes or negative say no.
A. Yes, and that is why the receiver is programmed to ignore any IR signal that does not have a corresponding RF signal.
Q. So for purposes of locating, identifying a tag in a location system, it is necessary for the system to

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receive the RF signal; is that correct?
A. Can you repeat that question?
Q. For purposes of the operation of this indoor positioning system, in order for the system to determine the location of a specific tag, it has to receive the RF signal from that tag; isn't that correct?
MR. LENNON: Objection. Objection to form.

You can answer.
A. That is correct.
Q. And if it receives just the IR signal but not the RF signal, the indoor positioning system would not be able to locate a specific tag?
MR. LENNON: Objection to form.
Q. Correct?
MR. LENNON: You can answer.
A. Yes, that's correct.
Q. So the signal is sent every ten seconds or when the button is pushed. Where does it go?
A. It goes to a Radianse receiver which they generally refer to as a LanPak. I think I refer to as a receiver assembly in my expert report.
Q. What is in the assembly? Did you actually look at the assembly?
A. I looked at the photographs of the internals of

the assembly, and I read all the source code for both, both pieces of its -- both processors within it.
Q. What does the assembly consist of?
A. The assembly consists of a PIC microprocessor which is the low-level receiver -- receiving processing unit, and a higher level Net 50 processor which is responsible for communicating over the hospital network.
It also has two antennas and two IR receivers.
Q. Does it have any RF receivers?
A. Those would be the antennas, yes.
Q. The antennas are RF receivers?
A. Mm-hmm.
Q. They are separate from the IR receivers but in the same box, is that how it works?
A. Yes.
Q. Do you have any idea why it has two of each of them?
A. I am not an electrical engineer.
Q. So the answer is --
A. The answer is I would have to speculate.
Q. I wouldn't ask you to do that.
Just to be clear, the RF antenna does not receive the IR signal, right?

A. That's correct.

Q. And the IR receiver does not receive the -- sorry. We are both speaking at the same time. Let's start over. The RF antenna receives the RF signal but not the IR signal; is that right?
A. That's correct.
Q. And the IR receiver receives the IR signal but not the RF signal?
A. Yes.
Q. Now, what happens when those signals are received?
A. Well, the PIC co-processor is watching the antennas and the receivers. When it starts to see a pulse train on the RF, it collects it, runs it through some software that decodes it. It is Manchester encoded format.

If it has received a valid RF signal, it pulls out the various pieces of it, the battery level, the button counts, the tag ID. It waits for no more than I believe it is 1.2 milliseconds, but I would have to look at the code to confirm that number, and if it has not received the corresponding IR pulse by then, it takes the packet it receives and sends it up to the Net 50 processor.

If it, on the other hand, within that window of time, it receives an IR pulse, it modifies the packet that it sends to the Net 50 processor to say, yes, I also received an IR pulse.
Q. Now, what is the time difference between the transmission time of the RF signal from the tag and the transmission of the IR signal?
A. They are as close together as the tag can do them. The instructions happen back to back.
Q. What is the time difference?
A. The time difference, once again, without counting the number of instructions that it takes to send each one, I would have to speculate, but I would say it would be on the order of 300 microseconds.
Q. So the receiver PIC code processor waits for 1.2 milliseconds?
A. Right. That's 1200 microseconds.
Q. And if it has not received an IR pulse, it sends the RF signal along to the Net 50 processor; is that right?
A. It sends a reception packet, which has, contains

slots for both RF and IR data, but it doesn't fill in the IR data.
Q. And then what happens after that in terms of the

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signal? We are following it up the path here.
A. Oh, okay. The Net 50 processor is listening on a serial port that is connected to the co-processor. The data packet that is sent from the co-processor is -- once again, I would have to consult the code to be sure but on the order of 20 bytes long.
As it receives characters on the serial port, it stuffs them in a buffer. When the buffer is -- when the buffer contains a complete message, it turns around, takes the message out of the buffer and stuffs it into a pending transmitted message. The Net 50 processor maintains two, two areas in memory where it builds messages to send on to the server. One of them is the one that it is currently building up to transmit every ten seconds.
So when this new message comes in, it examines the buffer to see if it already has a message from that tag ready to transmit. And if it does, it modifies that part of the message to reflect the most recent received data.
If it doesn't already have a message from that tag ready to go, it appends it to the buffer.
Q. Now, the Net 50 processor, how often does that transmit --

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A. I was just coming to that.
Q. Okay.
A. After the Net 50 adds the most recently received message to the buffer, it examines it. If the message included a button press, it immediately transmits the entire buffer. If it didn't include the button press, there is another task running within the Net 50 processor that every ten seconds causes it to transmit whatever it has accumulated.
Q. So if it hasn't received a button press, it waits until ten seconds is up from the prior transmission; is that right?
A. Yes.
Q. And then it at the time it transmits, it transmits whatever it has in its, what do you call it,

buffers?
A. Buffer, yes.
Q. One buffer?
A. It has two buffers, because it takes a finite amount of time to transmit a buffer, so while it is transmitting one, it has another one free to start building the next message.
Q. So it always transmits every ten seconds, unless there is a button press?

A. Yes.
Q. And what if it doesn't have anything in its buffer, does it transmit?
A. Yes, it transmits anyway.
Q. Do you know how the Radianse location algorithm works?
A. Yes, I do.
Q. Is any use made of a transmission where there is nothing in the buffer by the algorithm?
A. The location algorithm does not use that message. Other parts of the server do, because the transmission from the receiver assembly is used as kind of a heartbeat. The system expects to hear from each receiver assembly every so often.
If it hasn't heard from a receiver in awhile, it flags it as being off line, records a record in the database.
Q. Now, is there anything else that happens in the receiver block, including the co-processor and the network processor, of the Radianse system besides what we have already discussed?
MR. LENNON: Objection to form. You can answer.
A. I've not entirely -- I can't entirely remember

what I just described. But I think I described everything that happens during normal operation.
There is some start-up logic where it happens once every time you power the system up, where it acquires a network address and does some other things.
There are a number of functions programmed into the Net 50 that actually weren't used for anything that I could find. They looked like dead code, what we call a dead code in the business, that either at one time

had some function but they removed the function but not the block, or that they put in to allow for future functionality. A number of commands that can be sent up and down the serial connection between the co-processor and the network processor.

Q. Okay.

A. But I think I have described the main function of the thing.

Q. Now, with reference to the receivers, do you know if they are placed by Radianse so that there is one receiver in every room of the system?

A. I have never seen an actual installation of the system. That would be one way you could position them. Based on the way their software works, I don't think it is the only one.

Q. Does that mean that the software will operate to locate that tag if there is not one receiver in every room?

A. The software has no idea what a room is. The software merely takes the signals from a number of receivers and does the best it can to associate a tag with the best one of them.

Q. Well, we will jump ahead a little. While we are on that subject, how does it do that?

A. You are asking about the location resolver?

Q. Yes.

A. Once again, this is from memory. The actual, the core of the location resolver code is about four or five pages of Java source code.

The algorithm looks at the current packet that it is receiving for a tag, and the previous history of the tag, in particular, it looks at the most recent previous location, and it goes through a multi-step decision tree, where it uses RSSI and the presence or absence of an IR signal to determine where the tag is, which of the two receivers to associate the tag with.

If the incoming signal includes an IR, as well as an RF component, and the previous location had an RF but not an IR component, the system automatically

assumes that the new location is the correct location.

If both had IR or neither had IR, the system uses the signal strength of the RF signals to decide

which of them is more reasonable.
That's a high-level overview. There are several other branching points in the logic, but that's basically how it works.
Q. Now, you referred to this RSSI, receive signal strength?
A. That's correct.
Q. Explain to me how that works.
A. When the co-processor receives an RF signal, it measures the strength of the signal, and that's part of the data passed to the Net 50 processor, along with whether -- along with the fact that it just got a signal, it says, and, yes, it was strength 3, say.
The Net 50 processor turns around and applies some bias to that RSSI as received, and transmits the biased RSSI as part of the data packet to the server.
So when the server gets a location packet for a particular tag, it gets a RSSI, which can be construed as being, although it is not identical to, how close was the tag to that receiver.
Q. That's relative signal strength?

A. Relative signal strength indication, RSSI.
Q. So that gives information about how close the tag was to the receiver; is that right?
A. In an open space it would give that information. But in a hospital it is not quite that simple.
Q. Why is that?
A. Because there are many things in hospitals that can attenuate the signal besides distance, intervening walls, intervening patients, interference on that frequency.
Q. Now, can the RSSI location resolver use more than one receiver input to provide location information relating to the tag, the specific tag?
MR. LENNON: Objection to form. You can answer.
A. Yes. And in fact, it does. I suspect that the way they have structured their tree, it would not handle simultaneous location reports from 50 transmit -- from 50 receivers, but it is, in fact, written to handle location reports from a smaller number.
Q. So when it gets multiple location reports from different receivers relating to a specific tag, how does it use that information?

A. My review of the code suggests that it uses them

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two at a time.

In other words, it processes location reports one at a time, comparing any new location report to the previously determined location, and deciding whether to change it or not.

Q. So that would only occur if the reception areas of the receivers overlap so that two receivers, at least two receivers could receive a given transmission; is that right?

A. Yes. Yes.

Q. How does the IR signal information get used in connection with the operation of this RSSI portion?

MR. LENNON: Objection to form. You can answer.

A. The location resolver algorithm appears to trust IR more than RF. My reading of it is that if a signal comes in that has weak RSSI, but does have an IR component, the location resolver will believe that location report rather than one that has a strong RSSI but no IR signal.

Q. Now, if no IR signal is received, the RSSI portion will still generate a location information based on the RF; is that correct?

MR. LENNON: Objection to form. You can

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answer.

A. Yes, if both -- if both the current location and the database and the incoming packet have no IR component, the location resolver will use the RSSI from both signals to determine whether or not to change locations.

Q. Now, if no RF is received, can IR be received by the system?

A. No. The co-processor won't even listen, won't even transmit a packet to the Net 50 processor if it doesn't have an RF signal.

Q. So if you were trying to operate the system, the Radianse system only with RF, it wouldn't work, would it?

A. Can you --

Q. Sorry, only with IR.

A. Thank you. As the system is constructed, no, it would not work.

Q. Now, let's go back to the net processor. When the buffer, when it sends out its signal every ten seconds, where does that go?
A. That is sent over the hospital local area network, the LAN, to the server computer.
Actually, it is sent one of two ways. If it is a -- if it has been sent as a result of a button

press, in other words, not on the ten-second schedule, it is sent to a separate port on the server that handles button presses. Otherwise, it is sent directly to the location resolver.
Q. If it is a button press situation does it still use the location resolver?
A. Yes. I am speculating because I didn't look at the way the system was installed. But I believe that sending the button press messages to a different port allows, would allow Radianse, if they chose, to prioritize those messages.
Once they are inside the server, the fact that it is a button press gets stripped off. Some actions are taken because it is a button press, but then the location resolving part happens just the same.
Q. Now, so the server is what applies this algorithm to determine a location based on the signals received; is that right?
A. Yes. Because only the server is talking to all the receivers. If the signal is received by more than one receiver, only the server would know that.
Q. Does the server send signals back down to the receivers?
A. I do not believe that it does in normal

operation. More of the dead code that I'm talking about, I found code where there are more ways for the server to send things to the Net 50. They did not appear to be used.
Q. Does the server pull or scan the receivers in any way?
A. The server scans, if you will, its input ports, looking for messages from the receivers.
Q. The server looks for messages that the server has received?
A. The server looks for messages in its in box, if

you will, that the receiver -- that the receiver assemblies have placed there.
Q. What does scanning mean as you understand it?
A. Scan is one of those words that has a number of meanings. It does not have a precise technical meaning. Colloquially it can mean look for, looks for messages. Yes, scan means look for.
Q. Does the server search the receivers for information or look for information at the receivers?
A. Once again, I do not think that it is transmitting any data to the receivers. It has the capability to transmit to the receivers. There is some code in the system that let's it broadcast a message to

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all receivers, for instance.
Q. Does the server keep a count of the number of times a given receiver has received a transmission from a given tag?
A. The server knows how many location messages it has received from a given tag. But that information appears to be implicit.
When it receives information it stuffs it in the database. It uses, it uses historical data to refine its location algorithm. In its current implementation the historical data is limited to the previous packet, I believe.
Q. Is there any equipment between the processor -- the receiver, rather, and the server --
MR. LENNON: Objection to form.
Q. -- in the Radianse system?
A. Between the receiver assembly and the server?
Q. Yes.
A. There is a -- in a real hospital there would be quite a bit of equipment between them, probably three or four different switches or hubs that the message must stop at and be sent on.
Q. All right. Are there any things that you would consider to be a collector or a concentrator between the

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receiver and the server in the Radianse system?
A. The Net 50 acts as a concentrator for messages from the co-processor. Between the receiver assembly and the server, there is nothing in the way of those messages.

And I point that out mostly because the Net 50 processor, the way the software is structured, it is clear that the Net 50 processor could support multiple co-processors. And there is no -- there appears to be no software architectural reason why the Net 50 processor couldn't support five co-processors, each with two antennas and two IR receivers.

Q. But the way you saw it configured, that's not the way it is done?

A. They have it configured one to one.

Q. Now, does the receiver -- is the transmission from the receiver to the server triggered by the receipt of a transmission from the tag to the receiver?

MR. LENNON: Objection to form. You can answer.

Q. In a non-button-push situation?

MR. LENNON: Same objection.

A. The contents of the message the receiver assembly transmits to the server are in response to the receipt of

a tag transmission. The message is very short, if no tags transmissions have been received, so...

Q. Well, there is a difference, isn't there, between the way a button-push transmission from a tag gets sent up to the server and another transmission which is not a button-push-type transmission?

MR. LENNON: Objection to form. You can answer.

A. The only difference is that one of them happens slightly more quickly than the other.

Q. So in the case of a button push, the Net 50 processor doesn't wait until the end of the ten-second interval? How soon does it send it?

A. Once again, immediately, where immediately may be as long as a millisecond or so, allowing for the software to format things and push them out the port.

Q. So is it fair to say that the button-push signal from the tag does trigger an immediate message to the server from the receiver?

MR. LENNON: Objection to form. You can answer.

A. Yes.

Q. And the regular or non-button-type push transmission from a tag does not trigger an immediate

transmission from the receiver to the server?
MR. LENNON: Same objection.
Q. Correct?
A. Yes.
Q. Now, is there any provision in the Radianse system for the operation of external devices in connection with this system?
A. Yes, there is.
Q. What is that?
A. They have an application called the Alerts application.
Q. Can you explain that, please?
A. That was not the focus of my code reading. I only glossed over it lightly. But there appears to be a way to configure the Radianse database so that if certain kinds of messages are received, they are passed along to the Alerts application, which in turn sends a message to an external device.
I did not read the code closely enough to see exactly what kinds of external devices they can trigger. Even doing it as a simple e-mail allows them to send pages, and I think I saw evidence of e-mail capability. I didn't look for anything else.
Q. Now, just with reference to Exhibit 2, the

Leipold report, who drafted that?
A. I drafted that.
Q. Are all the words in it yours?
A. Yes, indeed.
Q. There is a number of references to what the various patents involved in the suit refer to. Did you figure that out yourself or did you consult with someone else on that subject?
A. I consulted with Mr. Lennon for some of this stuff. The process was that I wrote the first draft and the second draft. Mr. Lennon came over to our offices and we spent a couple of long days consulting on it. I drafted the entire thing on my laptop.
Q. When you say on the top of page 7 of your report, in the first paragraph, "I assume that the combined RF and IR transmissions from the Radianse LitePak can be considered 'a light-based signal,'" why do you make that assumption?
MR. LENNON: Objection to form.

A. You left out -- thank you. You left out the first part of the sentence which is: "For the purpose of this discussion, I assume."
Q. Okay. Well, putting that in there, why do you make that assumption?

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MR. LENNON: Same objection.
A. Well, one reason for making the assumption is that I believe it to be true. Let's see.
Q. Now, there is not actually one transmission from the tag, correct? There are two separate transmissions separated by a period of time; is that right?
MR. LENNON: Objection to form. You can answer.
A. I don't regard those two transmissions as being separated by a period of time because they happen as close to simultaneously as the processor can do it.
Q. Well, they are sequential, right?
A. They are sequential.
Q. And there is some period of time, you said 300 milliseconds, approximately?
A. And I was guessing, but, yes, it certainly is in the ballpark.
Q. And they are separate transmissions, by separate --
MR. LENNON: I believe it was microseconds.
A. Microseconds. Sorry.
Q. And they are transmissions by separate transmitters within the tag; is that right?
A. Separate emitters.

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Q. So two different emitters and the emitters emit -- well, one emitter emits an RF signal, correct?
A. Yes.
Q. And that's the signal that has the tag ID in it, correct?
A. That's correct.
Q. And then after that another emitter emits an IR transmission that does not have the tag ID, correct?
A. That's correct.
Q. When you use the word "light-based signal" you are referring to some term in the patent, aren't you?
A. Yes.
Q. Are you making any statement as to how the patent

ought to be construed in that sentence? In other words, what the patent means?
MR. LENNON: Objection to form. You can answer.
A. I am making an assumption as to how a technical person would read that patent and the meaning of the patent.
Q. Well, the RF portion, the RF transmission from the tag is not light-based, correct?
MR. LENNON: Objection to form.
A. It is electromagnetic, as is the IR. But it is

not visible light-based.
Q. And when you as an engineer see the term "light-based" you are thinking of visible light-based, correct?
A. That's correct.
Q. And it would be a distortion to call an RF signal a light-based signal using the normal engineering parlance, correct?
MR. LENNON: Objection to form. You can answer.
A. Even IR is not visible light by that definition. So that is correct, I would not call the RF portion light-based, if all we transmitted was RF.
Q. So the portion of the transmission from the tag that contains the tag ID is not light-based, correct?
MR. LENNON: Objection to form. You can answer.
A. That is correct.
Q. Now, the IR signal by itself cannot be used to identify a specific tag, correct?
MR. LENNON: Objection, asked and answered. You can answer.
A. The fact of the matter is that the IR portion of the signal is never used by itself. If it occurs by

itself, the Radianse system throws it out.
It is part of the signal. They would not transmit it if it were not for the RF, because it has no meaning without the RF. So the IR signal is associated with the ID of the tag, which is contained in the associated RF signal.
Q. What happens in the system if an IR signal from

some other source gets received by the receiver?
A. It is ignored.
Q. With the system as you understand it, and the IR and RF, the receivers or antennas for the IR and RF portions, rather, IR and RF signals from the tag being in one box --
MR. LENNON: Objection to form.
Q. -- can the IR antenna be located in some position different from the, or rather the RF antenna be located in a different location than the IR receiver?
MR. LENNON: Same objection.
A. This is speculation, but I see no reason why not. It would take some software changes to do it, but, yes, it could be done.
Q. But it is not done the way you understand the system being operated, correct? They are located in the same location?

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A. Yes. And I could speculate about the reasons for that, but...
Q. So as far as you know, Radianse does not separately locate IR receivers and RF receivers?
MR. LENNON: Objection to form. You can answer.
Q. Right.
A. As far as I understand the system, that's true.
MR. LENNON: What did you mean by locate?
Q. Put them in different place, put an IR receiver in this room, an RF receiver in that room. It could do that, but it doesn't do that, correct?
MR. LENNON: Same objection.
Q. Head nodded means yes, right?
A. It means yes, they could have.
MR. LENNON: Same objection.
Q. When you say in the middle of the next paragraph on page 7, "While the Radianse LitePak transmits both IR and RF radiations, I believe the LitePak considered as a whole is an 'infrared transmitter,'" do you see that sentence?
A. Yes.
Q. What do you mean by that?
MR. LENNON: Objection to form.

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A. I stand by the sentence as written. The LitePak

transmits infrared. It is an infrared transmitter in the--
Q. As a whole, though, it is also transmitting something else, isn't it?
A. That's correct.
Q. So I am just wondering what you mean by "as a whole." You mean the whole unit?
A. This is in discussion of the '195 patent.
Q. I don't know. I'm just asking about that sentence.
A. This is, in fact, in a discussion of the '195 patent, and I believe that in the context of the '195 patent, the LitePak, the badge in the Radianse system is an infrared transmitter.
Q. So you are trying to say what the '195 patent requires in this sentence? Is that what you are trying to say?
A. I'm stating my interpretation of the sense of the '195 patent and applying it to the Radianse system.
Q. Well, the '195 patent is for purposes of locating tags, right?
MR. LENNON: Objection to form.
Q. Isn't that what the patent is about?

MR. LENNON: Same objection.
A. I don't have it in front of me, but that sounds reasonable.
MR. REPPERT: Let's take a look at it. Hold on a minute. Bear with me.
We will mark this as the next exhibit. It is the '195 patent. You have seen it before.
MR. LENNON: I've seen it before.
(Leipold Deposition Exhibit 4 was marked for identification.)
BY MR. REPPERT:
Q. This is for an object location, control and tracking system, right, looking at the abstract on the front? Correct?
A. Yes.
Q. And claim 1 is for an object location and tracking system for tracking infrared transmitters that transmit identifying codes, correct?
MR. LENNON: Objection to form.
Q. Column 31.
A. That's what it appears to say.

Q. And then claim 13 on column 34 is for a method for tracking and locating objects, right?
A. Yes, that's what it says.

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Q. So the transmitters involved in this patent have to be able to provide information that enabled the object to be located, correct?
A. Yes.
Q. And the infrared transmitters in the, as you just said, in the Radianse tags do not provide that information, do they?
MR. LENNON: Objection, mischaracterizes the witness' testimony.
A. I did not say that.
Q. Well, the infrared transmitters, the transmitters inside the infrared tags do not provide object location and identification information with respect to the tags, correct?
MR. LENNON: Objection to form.
A. That's not true.
Q. They don't provide the ability to identify and locate a tag, specific tag, do they?
MR. LENNON: Objection. Same objection.
A. That's not true.
Q. Just the infrared transmitters, infrared signal being transmitted from the tag, from the infrared transmitter in the tag, does not provide object location information, does it?

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MR. LENNON: Same objection. There were two questions in there.
A. Yes, I am working through this.
MR. LENNON: You can ask him to repeat it.
A. Can you repeat one of them at a time, please?
Q. The infrared transmitter in the tag -- first of all, there is an infrared transmitter in the tag, correct?
A. Two emitters, yes.
Q. One of them is infrared. I'm just talking about the infrared transmitter in the tag. That does not provide in the Radianse system information sufficient to provide object identification and location?
MR. LENNON: Objection to form.
Q. Correct?

A. I'm having trouble with the question because the infrared signal is never -- never stands by itself.
Q. I'm just talking about the infrared transmitter.
MR. LENNON: Objection to form.
Q. That information that comes from the infrared transmitter does not provide object location as to a particular tag in the Radianse system, does it?
MR. LENNON: Can you clarify what you mean by infrared transmitter?

Q. The same transmitter he has talked about as being existing in the ID tag. There are two transmitters. One is IR, one is RF. I'm talking about the IR transmitter.
A. I'm having a lot of trouble remembering the question. One more time, please.
Q. Okay. I'm asking you now about the IR transmitter.
MR. LENNON: Which you have referred to as the IR emitter.
A. The emitter, okay, I'll go with that.
Q. The IR emitter in the Radianse tag. That IR emitter does not provide object location, does it?
MR. LENNON: Objection to form.
A. The IR signal from the IR emitter refines the location for a given tag. That is its purpose. It can only refine the location for a tag if the tag is associated with that IR signal. And so the IR signal must be associated with a particular tag.
And, in fact, in the Radianse system it is, because of the precise temporal association between the two signals.
Q. The IR signal by itself does not provide you the information to provide object location, correct?
A. Yes, the IR signal by itself is ignored by the

Radianse system.
Q. You agree that the RF emitter in the Radianse tag is not an infrared transmitter?
MR. LENNON: Objection to form.
A. The RF emitter emits RF, not IR, so yes.
MR. LENNON: Just to clarify, you have given now, there is two definitions of infrared transmitter going out. You have associated infrared transmitter with an emitter, and in this document, in the sentence you

point to, associates infrared transmitter with the badge or LitePak, as Walt referred to earlier. So if you would like to clarify the question and answer, you may.

MR. REPPERT: You can do whatever you want on redirect.

BY MR. REPPERT:

Q. You say, "there are no statements in the claims of the '139 and '314 patents that the unique ID must be transmitted in the form of infrared radiation." That's the following sentence on page 7.

A. Yes, I see it.

Q. I'm going to show you the '139 patent.

(Leipold Deposition Exhibit 5 was marked for identification.)

Q. So Number 5 is the '139 patent, right?

A. Yes.

Q. Now, take a look at claim 1. It says, "A method for locating subjects within a tracking environment, the method comprising the steps of: for each subject, providing a TAG capable of transmitting a substantially line-of-sight signal including a unique TAG ID," do you see that language?

A. Mm-hmm.

Q. Why don't you tell me what you think "line-of-sight signal, including a unique tag ID" means?

MR. LENNON: Objection to form. You can answer.

A. I like the language as it is stated there. It means a signal that will probably not go through walls, that allows you to determine the ID of a tag.

Q. So you have a signal that -- and the identification of the tag is part of that signal, right?

MR. LENNON: Objection to form. You can answer.

A. That is true.

Q. So it would be a line-of-sight signal in which somehow encoded in that signal is the identification code of the tag, correct?

MR. LENNON: Objection to form. You can

answer.

A. Yes. I believe the confusion comes from the fact that a signal can be a multi-band signal. What the

expert report talks about is temporal associations giving signals meaning.
Q. Well, there is nothing in this claim telling you that this signal, including a unique tag ID, could be an RF signal?
MR. LENNON: Objection to form. You can answer.
Q. Right?
A. All that the claim language requires is that there is a line-of-sight component that let's you tell when the tag is within line of sight of the receiver.
Q. Now --
A. And that you would be able to infer the tag's ID from the signal.
Q. Where does it say that? Where is there any reference to components in this claim right here that I just read to you? That word is not there, is it?
A. No.
Q. It doesn't talk about any other signal besides a line-of-sight signal, correct?
MR. LENNON: That's not correct. But you

can answer the question.
A. Actually, the sentence also mentions a non-line-of-sight signal.
Q. Okay. For the next part?
A. It is in the same sentence.
Q. It talks about sending a unique tag ID by means of a non-line-of-sight signal, as well as transmitting it by a line-of-sight signal, correct?
MR. LENNON: Objection to form. You can answer.
A. I think, I think that in that particular sentence the word that helped me understand it is "substantially."
Q. Well, this claim talks about two different signals being sent from the same tag, right?
A. Yes, it does.
Q. One of them is line-of-sight?
A. Yes.
Q. And that line-of-sight signal includes the tag ID, right?
MR. LENNON: Objection to form. You can answer.
A. It says that the "line-of-sight signal including a unique TAG ID substantially simultaneously with a

24 substantially non-line-of-sight," yes.

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1 Q. And the non-line-of-sight signal also includes
2 the unique tag ID, right?
3 A. That's correct.
4 Q. So you are talking about two different signals
5 being sent from the tag, one of which is line-of-sight
6 and one of which is non-line-of-sight?
7 A. Mm-hmm.
8 Q. And both of those have in them the tag ID, right?
9 MR. LENNON: Objection to form. Are you
10 asking him to construe these terms in light of any
11 particular claim construction?
12 MR. REPPERT: I'm just asking my question.
13 MR. LENNON: You can ask --
14 MR. REPPERT: He made some comment about
15 what the claim said. I'm asking him what he thinks the
16 claim says.
17 MR. LENNON: Sure. And you may ask for
18 clarification on what he means by any particular term he
19 is using, because there are more than one proposed
20 interpretation of the patent.
21 MR. REPPERT: Can you read the question
22 back, please.
23 (Record read.)
24 THE WITNESS: My reading of that claim

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1 sentence is that both of them allow the tag ID to be
2 determined. I believe I read the word "substantially" to
3 give me that latitude.
4 BY MR. REPPERT:
5 Q. So the tag under claim 1 here has a line-of-sight
6 signal, correct?
7 A. Yes.
8 Q. And that signal, line-of-sight signal includes a
9 unique tag ID, right?
10 MR. LENNON: Again --
11 Q. I'm asking you for your understanding of what is
12 said here.
13 MR. LENNON: I'll just point out for the
14 record that "including" is subject to more than one
15 interpretation. Radianse has their proposed construction
16 and we have our proposed construction.
17 To the extent you are asking the witness to

use one or the other of the constructions, then you should clarify that for the witness.
BY MR. REPPERT:
Q. Just answer the question, please.
A. My reading of the signal is that including allows the tag ID to be sent out of band as part of the other signal.

Q. It also says that there is a non-line-of-sight signal that's also including the tag ID, right?
A. Yes.
Q. Is it your testimony that this claim would be covered by a tag that sent the signal by non-line-of-sight but did not send the signal including the unique tag ID by line-of-sight?
MR. LENNON: Objection to form. You can answer.
A. My reading of this patent, and my reading of that claim, lead me to believe that the patent describes a system that sends line-of-sight and non-line-of-sight signals, and allows the tag ID to be determined for both line-of-sight and non-line-of-sight signals. That's what I read that sentence to be.
Q. Doesn't it say here that the line-of-sight signal and the non-line-of-sight signal, each of them has to include the unique tag ID? Isn't that what that says?
MR. LENNON: Objection to form, asked and answered.
A. I address the issue of including in my expert report --
Q. I'm just asking you about claim 1.
A. I've answered the question for claim 1, I

believe.
MR. REPPERT: Please read it back. I want to get an answer to this.
(The record was read: Q. Doesn't it say here that the line-of-sight signal and the non-line-of-sight signal, each of them has to include the unique tag ID; isn't that what that says?)
MR. LENNON: He wanted the answer read back. I'm sorry, he asked for the answer to be read back.
(Discussion off the record.)
MR. REPPERT: I don't need the answer.

MR. LENNON: You just asked for the answer to be read back, so I'll ask that you read the answer back on the record, please.

(The record was read: A. My reading of this patent, and my reading of that claim, lead me to believe that the patent describes a system that sends line-of-sight and non-line-of-sight signals, and allows the tag ID to be determined for both line-of-sight and non-line-of-sight signals. That's what I read that sentence to be.)

MR. REPPERT: I ask you to read my question again, please.

(The record was read: Q. Doesn't it say

here that the line-of-sight signal and the non-line-of-sight signal, each of them has to include the unique tag ID; isn't that what that says?)

MR. LENNON: Is there a question pending?

MR. REPPERT: He hasn't answered it, has he?

MR. LENNON: I believe he --

MR. REPPERT: She just read the question. I didn't hear an answer.

MR. LENNON: Was there an answer to the question you just read? Sorry.

MR. REPPERT: Read the question again. I want a specific answer to it, yes or no.

MR. LENNON: Objection to form. You don't have to answer yes or no. You can answer in any way that you care to.

(The record was read: Q. Doesn't it say here that the line-of-sight signal and the non-line-of-sight signal, each of them has to include the unique tag ID; isn't that what that says?)

THE WITNESS: I will still stand by my previous answer.

BY MR. REPPERT:

Q. If you look at column 5 of that patent, it is down at line 60, approximately, it says, "Each badge also

transmits a radio frequency signal via an antenna."

Then it goes on, "The digitized infrared light and the radio frequency interlace contain badge identification data," do you see that?

A. Mm-hmm.

Q. Now, is it your testimony this patent does not require the IR signal to contain the coded tag ID?
A. As long as it can be determined somehow, yes.
Q. Now, let's look at the '314 patent. It is the next one. That will be Exhibit 6.
A. You may want to submit a different copy of Exhibit 2 because it is missing two pages.
Q. That's your report. Which pages?
A. It is missing 8 and 9 in this copy. Jim's does have them.
MR. REPPERT: Mine has 8 and 9. Can you switch it, swap it?
(Leipold Deposition Exhibit 6 was marked for identification, and Leipold Deposition Exhibit 2 was remarked for identification.)
BY MR. REPPERT:
Q. Have you read the '314 patent?
A. Yes.
Q. Now, that's a system for an IR, that's an IR,

what is described there as an IR locating system, isn't it?
MR. LENNON: Objection to form.
A. I believe so. Yes.
Q. And the IR tags transmit unique identifying codes using IR, that's what is stated in this patent, correct?
MR. LENNON: Objection to form.
A. Yes.
Q. There is no reference in this patent at all to RF, is there?
A. I don't believe there is.
Q. Take a look at page 8 of your report, paragraph before the last paragraph. The last sentence says, "Because of its required timing association with an RF signal, the IR signal in the Radianse architecture allows a tag's ID to be identified." Can you explain what you mean by that?
A. I think the sentence says it all. There is a -- when a receiver receives an IR signal, it already knows the tag ID of the tag transmitting the IR signal.
Q. So it gets that from the RF signal, right? The tag ID comes from the RF signal, correct?
A. Mm-hmm. Yes.
Q. So it is the RF signal that allows the tag's ID

to be identified, isn't it?
MR. LENNON: Objection to form.
A. Once again, the sentence says when a receiver receives an IR signal, it knows the ID of the tag transmitting the IR signal.
Q. It knows that from the RF signal, correct?
A. Yes, it does.
Q. So it is not the IR signal that allows a tag's ID to be identified. It is the RF signal. Isn't that right?
A. It is the IR signal that allows the tag to be identified in the limited area.
Q. The only way the tag can be identified is if an RF signal is received, correct?
A. That's correct.
Q. And then the IR signal does not allow the tag's ID to be identified, does it?
A. Perhaps that sentence should have said something about local area detection. But, in fact, the IR signal has an associated ID value that the receiver knows.
Q. The IR signal does not allow the tag's identification to be identified, does it?
MR. LENNON: Objection to form.
A. Once again, if the co-processor allows itself to

receive an IR signal, it already knows the tag ID.
The fact that the tag ID is not coded directly in the IR signal, in the Radianse's architecture, doesn't matter.
Q. But isn't your sentence wrong here? The IR signal is not what is allowing the tag to be identified. It is the RF signal?
MR. LENNON: You are referring to half of a sentence and you are not referring to the entirety of the sentence, so I'll object to mischaracterizing the document. Asked and answered.
Q. You can't determine the identification of the tag from the IR signal, correct?
A. I think I have already addressed that.
Q. And the answer is yes, isn't it?
MR. LENNON: Objection to form.
A. If all you receive is an IR signal -- well, if all you get is an IR signal, the receiver won't even receive it, so yes.

Q. Have you ever read the '719 patent?
A. Yes, I did at one time.
MR. REPPERT: We will mark that as the next exhibit.
MR. LENNON: Do you have another copy of the

'314?
(Leipold Deposition Exhibit 7 was marked for identification.)
MR. REPPERT: Here is '791. Here you go.
MR. LENNON: Thanks.
BY MR. REPPERT:
Q. Have you read this patent?
A. Yes, I did.
Q. That's Number 7, correct?
A. Yes.
Q. Now, if you take a look at claim 25, please. It is on column 66.
A. Got it.
Q. At the bottom of the page it says, "TAG transmissions from an assigned area of a predetermined size"?
A. I see that, yes.
Q. Do you have any idea what that means for purposes of this patent?
A. For purposes of this patent, I believe this means that if you associate a tag with a given receiver that you know the area the tag must be in.
Q. Have you ever read the file history of this patent?

A. No, I did not.
Q. Do you know anything about the rules of how words of a patent claim have to be construed?
A. No, I do not.
Q. So you don't have any legal understanding of what that "assigned area of a predetermined size," what that term means, correct?
MR. LENNON: Objection to form. A legal understanding hasn't been defined yet by the court and there are proposed -- I'll let the witness know, there are proposed claim constructions and you may ask to read the proposed claim construction of this term if you like.
MR. REPPERT: Just answer the question,

please.
MR. LENNON: You may answer in any way you wish.
THE WITNESS: While I'm not a patent attorney, I read these patents as an engineer would. An engineer's understanding of that sentence is as I have answered already.
BY MR. REPPERT:
Q. You have no knowledge as to whether or not the person applying for the patent limited the scope of the patent by making certain statements during the patent

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application process?
MR. LENNON: Objection to form.
A. If they were not in the patent, I don't know about them.
Q. Now, with reference to these receivers, what is the range of the receivers? Do you have any idea?
A. In which system?
Q. In the Radianse system.
A. I have seen numbers that indicate that it is around ten meters radius.
Q. And the range isn't adjusted by Radianse, is it?
A. I believe it is adjusted on occasion. They dial it down to make it less sensitive.
Q. How do you know that?
A. There was some testimony about that that I saw and noted in my expert report, and I noted while reviewing the source code that the receiver, the Net 50 processor in the receiver applies a bias to the RSSI.
Q. Explain how that happens.
A. For every packet that the co-processor in the receiver assembly receives, which is transferred to the Net 50 processor, the Net 50 processor reads a global RSSI offset and applies it to the RSSI reported by the co-processor, before it transmits it up to the server.

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My reading of that is that it is a way to adjust the RSSI sent to the server.
Q. So you are not adjusting the range of the receiver. You are not adjusting whether or not a signal can be received. You are adjusting how the signal gets treated. Is that right?
A. I believe that to be the case. There are some

pieces on the circuit board I couldn't identify that were not identified by anybody at Radianse. I don't know if they can do it in hardware also. I do know they have the capability to do it in software.

Q. Have you ever heard of the word "variable-based protocol," the words "variable-based protocol"?

A. I have heard those words in I believe it was this patent. Certainly in one of these patents.

The words have never been used in that -- together before, as far as I was able to determine, anywhere in the history of computer science or engineering.

Q. So before this, your retention in this case, you had never heard that term?

A. No.

Q. Had you ever heard of SNMP?

A. SNMP, yes, I have heard of that.

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Q. And what is that?

A. It is the simple network management protocol. It is a protocol for querying remote network devices and managing them.

Q. And is it a variable-based protocol?

MR. LENNON: Objection to form.

Q. As you --

A. Since the words "variable-based protocol" have no meaning acknowledged by anyone in any industry remotely associated with SNMP, no, it is not a variable-based protocol.

MR. LENNON: Again, I'll note for the record there is a proposed claim construction for the term, so if, you know, if there is any confusion as to what he is talking about when he refers to variable-based protocol, you can ask him whether he is referring to his proposed construction or your proposed construction or Versus' proposed construction.

MR. REPPERT: You can object if you think there is an objection and you can ask questions at the end, but you shouldn't interject like that.

MR. LENNON: Thank you for instructing me on how to be an attorney, sir. We will go over the local rules after this.

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BY MR. REPPERT:

Q. Have you read the '195 patent with reference to the term "variable-based protocol"?
A. Yes, I have read the '195 patent.
Q. And is there a description of the use of the variable-based protocol in that patent?
A. I believe the first mention of variable-based protocol occurred in the more complete phrase "object identifier variable-based protocol."
Q. Okay.
A. And subsequently, that was elided to just variable-based protocol. Object identifier does have a technical meaning.
Q. What is that?
A. Object identifier is the address, the way to access a particular attribute of a particular device on the network.
Q. Okay. And is SNMP an example of that?
A. SNMP uses object identifiers to give addresses to objects and the attributes of objects.
Q. How does it do that?
A. Are you asking for a description of SNMP addressing?
Q. Yes.

MR. LENNON: Objection to form.
A. Well, this is from memory and a very brief introduction. But SNMP uses -- for every managed network device SNMP provides what is called a management information block, which is a list of all the object identifiers of the attributes of the object.
So for instance, a laptop computer, if it is talking SNMP, might assign a particular object identifier to the number representing the current amount of memory being used. That number would be a long hierarchical sequence of digits with dots between them.
The protocol allows for management workstations to discover all of the object identifiers in a remote object, even if it doesn't know what they mean. It can query what -- it can ask the device, give me your first object identifier and its value, and give me your next object identifier and its value, and keep on asking that question until it runs out.
Q. Okay. So is that an object identifier variable-based protocol?
MR. LENNON: Objection to form.

A. Once again, even, even the full phrase, all five words, doesn't have any meaning. Protocols don't transmit variables. They transmit values. It might be

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fair to characterize SNMP as an object identifier protocol.
Q. What does the P in SNMP mean?
A. Protocol.
Q. So SNMP is a protocol, right?
A. Yes.
Q. And this, what you just described on management of variables, is done by means of SNMP?
A. That is correct.
Q. And the patent in the abstract, if you look at the '195 patent, Leipold Exhibit 4, first page, talks about an object identifier variable-based protocol such as SNMP, correct?
A. Yes.
Q. So they are saying -- is it your testimony that that is an incorrect statement? There is no such thing as an object identifier variable-based protocol such as SNMP?
MR. LENNON: Objection to form.
A. I do not believe it is an incorrect statement. I believe that it is unfortunately phrased.
Q. In what way?
A. I believe that a more meaningful phrasing would be just object identifier protocol such as SNMP.

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Variable-based doesn't mean anything.
Q. Well, there are variables that are managed by means of SNMP, right?
A. Yes, but when we talk about the values that are associated with object identifiers we call them objects, not object identifier variables.
Q. If you look at column 2 of line 8.
A. Column 2, line 8.
Q. It says, "The computer accesses these devices using object identifier variables and a variable-based protocol," does that phrase I just read make any sense to you or not?
A. I can tell it made sense to the author and I can infer what he must have meant, but it is not very accurate or precise terminology.

Q. Well, can you get an understanding of what this guy was trying to cover with this patent by reading this patent?
A. Yes.
Q. Why don't you explain to me what he was trying to cover when he said that language I just read, "using object identifier variables and a variable-based protocol"?
MR. LENNON: Objection.

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Q. You can refer to, look at other parts of the patent if you need to, to try to gain an understanding of what this is supposed to cover.
MR. LENNON: Objection to form. You can answer.
A. I read that sentence to mean that the author of the patent wanted to be able to address individual tags, using their object identifiers, and using some pre-existing protocol to get at the values of the object identifiers.
In particular, in the context of the Radianse system, for instance, a tag might have identifiers for its battery state, and for its number of button A presses and number of button B presses. Those would be object identifiers, referred to those.
I don't know any other meaning he could have had besides that, based on my reading of the patent.
Q. Now, does the fact that he has pages and pages of description of how the system works, starting at, looks like column 8 in the middle, going on through --
A. It looks like column 31.
Q. -- column 31, toward the bottom, where the claims start, does that tell you that he had any understanding when he wrote this patent as to what he meant --

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MR. LENNON: Objection to form.
Q. -- by object identifier variables and variable-based protocol?
MR. LENNON: Same objection.
A. Those 23 columns, or however many there are, are an introduction to SNMP. The code examples are copied from some place else. I don't know whether the author of the patent understood everything he copied into the patent or not. I hope he did. But those are widely

available examples of how to do SNMP, in one particular programming environment for nonprogrammers, which is visual basic.
Q. Is it your testimony that any protocol that has variables in it or relates to variables is a variable-based protocol?
A. I think my previous answer, the phrase "variable-based protocol" doesn't mean very much. I'll stand by that. Protocols transmit values.
Q. So when this patent requires a variable-based protocol that implements object identifier variables, it doesn't make any sense at all?
A. It makes --
MR. LENNON: Objection to form. You can answer.

A. Once again, I can infer what the author meant and what he meant means something. But what he wrote is confusing.
Q. It is fair to say that Radianse does not use SNMP, correct?
A. I don't believe they use it.
Q. Radianse doesn't manage the content of the variables the way SNMP manages the content of variables, right?
MR. LENNON: Objection to form. You can answer.
A. Can you clarify that question, please?
Q. No. I'm just going to stay with it. If you can't answer it --
A. "Manage the content of variables" is not precise. They do not -- they certainly don't transmit data down to their receivers from their server, as something like SNMP would suggest. They don't query the receivers for tag ID by object identifier the way SNMP would suggest.
MR. REPPERT: We will take a break and then go to the next item.
(Recess taken.)
BY MR. REPPERT:
Q. Referring again to the '195 patent, does

Radianse's system have object identifiers in the sense of the term "variable-based protocol" that implements object identifier variables?

A. As I said, I don't think those two phrases at the end mean much. But, in fact, the Radianse system does not use explicit object identifier addresses to refer to parts of the -- to refer to fields of the tag such as battery life and button press count.
Q. What I would like to do now is move to your declaration, which we will mark as the next exhibit, Number 8.
(Leipold Deposition Exhibit 8 was marked for identification.)
Q. You are referring here to the statement of facts in Radianse's brief, that will be number 9. The Radianse brief will be number 9.
A. Could that be Number 9, page 2?
Q. This is Number 9.
A. Oh, okay.
(Leipold Deposition Exhibit 9 was marked for identification.)
Q. Just take a look at page 4, starting on page 4. It is a series of facts stated there, facts related to non-infringement.

MR. LENNON: Which exhibit are you talking about?
Q. Exhibit 9.
A. Okay, page 4.
Q. Between facts 1 through 35, pages 4 through 9, are those the facts that you are referring to when you say that, you make reference to statements of fact, SF? Look at paragraph 2 of your report and paragraph 3 of your declaration.
MR. LENNON: Do you mean --
A. Yes, I am, yes.
Q. So you are referring to the statements of fact in Radianse's opening brief, correct?
A. Yes, indeed.
Q. Okay. So I just want to make sure we are talking about the same thing. That's Exhibit 9, right?
A. Yes.
Q. Now, you don't make any statement relating to facts 1 and 2, correct, in your declaration?
A. Correct.
Q. And then regarding fact number 3, you say, "The Radianse ID tags transmit identification codes by means of infrared (IR) transmissions." Do you see that?

24 A. That's what it states.

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1 Q. Now, that's not true, is it, the first sentence
2 of paragraph 3 of your declaration?
3 MR. LENNON: Objection to form.
4 A. As it explains in the rest of my response to
5 statement of fact 3, the IR signature constitutes an
6 identification code that allows the Radianse system to
7 distinguish this signature from infrared signals
8 transmitted from sources other than Radianse ID tags.
9 Q. It is not an identification code of the sort
10 that's transmitted by the code, correct, by the tag?
11 A. I go on to state, "Additionally, because of the
12 precise temporal associations imposed by the Radianse IPS
13 between its IR and RF signals, each IR transmission from
14 a Radianse ID Tag is understood to include the unique
15 identification code sent by its corresponding RF
16 transmission."
17 Q. We are just looking at your first sentence again.
18 A. The first sentence is only the introductory
19 sentence of a paragraph and the --
20 Q. It says -- just talking about that one sentence,
21 that's not a correct sentence, is it? You don't transmit
22 the code's identification, the identification code of the
23 tag by means of IR. Didn't you just tell me that?
24 MR. LENNON: Object.

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1 A. I stand by that sentence as explained by the
2 remainder of the paragraph.
3 MR. LENNON: Objection.
4 Q. Each tag is an identification code, correct?
5 A. Correct.
6 Q. And the identification code is not transmitted by
7 IR, correct?
8 MR. LENNON: Objection to form. Are you
9 referring to identification code as being synonymous with
10 unique identification code?
11 Q. Just answer my question. The code has an
12 identification, the tag has a code, correct? Each tag
13 has a code?
14 A. Each tag has a unique ID, yes.
15 Q. And that code is an ID code for the tag, right?
16 A. Yes.
17 Q. And that ID code is not transmitted by IR, it is

transmitted by RF, correct?
A. It is not embedded in the IR signal.
Q. Now, look at paragraph 4, if you don't mind, of your report. First of all, let me just ask you: Is this your declaration, the one that's Exhibit 8?
A. This is my declaration.
Q. Take a look at paragraph 4 of your declaration.

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A. Okay.
Q. And you say that "To the extent that any asserted claim requires the transmission of a unique identification code in the form of IR radiation, the Radianse IPS performs the same function, in the same way, to achieve the same result." Did I read that right?
A. Yes.
Q. Now, can you tell me what the characteristics are of radio frequency transmissions versus IR transmissions --
MR. LENNON: Objection to form.
Q. -- from an engineering point of view?
A. Radio transmissions are less likely to penetrate solid objects.
Q. Radio transmissions?
A. Yes, less likely to penetrate solid objects -- I mean more likely to penetrate solid objects. I misspoke. That's the primary difference between them.
Q. So you would agree that the transmission of the unique code ID by radio frequency would enable you to receive the radio transmission, including a unique tag ID in locations where you might not be able to receive a transmission of the unique code ID by means of infrared?
MR. LENNON: Objection to form. You can

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answer.
A. Yes, there are configurations where a receiver could receive an RF transmission from a given location where it could not receive an IR transmission from that location.
Q. If you had a tag and the tag was covered by clothing, opaque clothing, the IR signal being transmitted from the tag could be blocked potentially by the clothing, right?
A. Yes.
Q. And an RF signal is less likely to be blocked by

clothing than an IR signal?
A. Yes.
Q. So it is fair to say that the IR transmission and the RF transmission don't work in the same way, right?
MR. LENNON: Objection to form. You can answer.
A. I'm not sure what "same way" means. But as the two previous questions illustrate, they are different.
Q. And there can be different results in terms of being able to receive the transmission, right?
A. Once again, I have trouble understanding "result." But since the different signals can be received by different receivers, potentially a different

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result could ensue.
Q. And is there any difference in the economics of operating in terms of how much energy is used to operate an infrared transmitter versus a radio frequency transmitter?
MR. LENNON: Objection to form. You can answer.
A. There may be such a difference. I'm not a hardware engineer, so I am not inclined to speculate on the difference.
Q. You would agree that RF transmissions have different physical properties and characteristics from transmissions that are light-based, such as IR transmissions, right?
A. Both are electromagnetic radiation. Because they are different frequency, they have different penetrating powers, refractive abilities and so forth.
Q. You agree that RF transmissions are of different wavelength than IR transmissions?
A. Yes.
Q. Now, you don't address paragraphs 5 through 8 of the statement of facts?
A. True.
Q. Is that because you have no knowledge with

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respect to those paragraphs?
MR. LENNON: Objection to form.
A. I would have to speculate on that.
Q. Take a look at paragraphs 5 through 8 of the statement of facts.

A. Paragraph 5 would require a hardware engineer to respond to.
Q. Okay.
A. Paragraph 6 seems to be something that I would not have objected to. It seems to be a statement of fact.
Statement 7 appears to me to be a statement of fact that I would not have commented on it.
Q. Number 8, does that seem to be a correct statement, as far as you can figure out?
A. The second sentence is unobjectionable.
ID tags -- I would probably argue with that, the first sentence in the "ID tags are identified by," but maybe not.
No, I'm not going to argue with paragraph 8.
Q. Okay. Just for the record, that paragraph says, "In the Radianse IPS, ID Tags are identified by signals that are transmitted in the form of RF packets that are sent as 80 bits of Manchester encoded data. In

particular, each RF packet includes a 32 bit unique identification of the ID tag."
In paragraph 9 you disagree, you say you disagree with Radianse's assertion that the RF signal constitutes the primary information used by the Radianse IPS software. Why do you disagree with that?
A. For the reasons stated in my paragraph there. Mainly because the location resolver code gives IR signals at least as much weight as the RF signals. If two signals are received, that both have RSSI, RF values and IR values, the system will use the RF signals strength to determine location. But if one has IR and the other one doesn't, it ignores the received signal strength.
Q. If one has RF and the other one doesn't, then it doesn't have IR?
A. If one has IR and the other one doesn't, it always appears to believe the IR signal, no matter what the signal strengths are.
Q. If the signal has RF but no IR, then the RF is the method used to determine location, correct?
MR. LENNON: Objection to form.
A. If neither the previous signal nor the current one have IR, then RF is used to determine location.

Q. Now, taking paragraphs 10 and 11, you don't have any comments on those. 10, 11 of the statement of facts.
A. Mm-hmm.
Q. Read those statements of fact and tell me whether you disagree with them.
A. I do not disagree with number 10.
I don't believe I disagree with number 11.
Q. Now, let's go to number 12. Let's look at the statement of fact first before you look at your report. The first sentence of paragraph 12 says, "The RF transmissions from ID Tags in the Radianse IPS are followed by the transmission of a short IR signature in standard industry format that does not contain identification information and is not unique to Radianse."
Do you agree or disagree with that?
A. I am skeptical of the last clause, that the signature is not unique to Radianse. I do not believe that a competent engineer could be transmitting exactly the same signal that a variety of other devices might transmit and confuse his system.
Q. Do you have any knowledge?
A. I have no knowledge. I only base it on sound engineering principles. There is no technical reason why

they would transmit exactly the same signature as something else, since both the signature and the receiver and the transmitter are coded in software and they could easily change it to be different from someone else's signature.
But I have not surveyed the field to find out whether or not that signature is unique or not. I just find it difficult to believe that it is not unique.
Q. Okay. Take a look at the next sentence, "The IR signal can only be received if a valid RF packet is received." Is that correct?
A. Yes, I have stated that already.
Q. The next sentence, "The IR signal has no relevance or meaning by itself." Is that correct?
A. If the IR signal is received without -- well, the IR signal will not be received without an RF so, yes, I guess that sentence is true.
Q. Now, 13, 14 and 15 you don't address. Let's just take a look at those. 13 says, "The IR signal

transmitted by the ID tags in the Radianse IPS does not identify the ID tag." Is that correct?
A. If the IR signal is transmitted without an RF signal, the IR signal does not allow the ID tag to be identified.

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Q. Now, the next paragraph, 14, talks again about primary means, so that seems to repeat what we have before here.
Number 15, "The Radianse IPS requires the RF signal to locate the ID Tags, but does not require the IR signal either to identify or locate ID Tags." Is that correct?
MR. LENNON: Objection to form.
A. I am not comfortable with that statement because the Radianse system definitely does use the IR signal to refine the location of a tag.
Q. But it doesn't require an IR signal, correct?
A. It will operate with less precision without the IR signal.
Q. But it will give a location, it can locate a tag using RF without IR, correct?
A. Yes.
Q. So the next paragraph, the first sentence of 16 of the statement of facts says, "In the Radianse IPS, Receivers are deployed with overlapping areas of signal reception."
Now, do you have any knowledge about how the receivers are deployed?
A. I have very little knowledge of how they are

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deployed. I have read statements where they have deployed them overlapping and then detuned them. So I presume that they have deployed them overlapping on occasion.
Q. And the software permits signals from multiple receivers to be processed with respect to one tag?
A. The software was written with that in mind, yes.
Q. The next sentence says, "The received signal strength (RSSI) from an ID Tag at a Receiver is proportional to the distance of the ID tag from the Receiver." Is that correct?
A. It is broadly correct, yes.
Q. The next sentence says, "The RSSI value from an

ID Tag is the primary means by which the locations of the ID Tags are determined by the Radianse system." Do you agree with that?
A. No.
Q. For the reasons you talked about before?
A. For the reasons I've discussed.
Q. Because you say equal weight is given to IR and RF?
MR. LENNON: Objection, mischaracterizes the witness' testimony.
A. In fact, the IR is given more weight, because of

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my previous statement.
Q. In certain circumstances, depending upon what signals were received before?
A. If there is IR now and there wasn't IR then, it will believe the IR now no matter what the signal strength is.
Q. The next sentence says, "The use of ID Tags that transmit the unique TAG ID by means of RF enable multiple receivers in different rooms to receive a given tag transmission and enable Radianse to determine the location of the tag by means of RSSI." Is that true?
A. Once again, using only RSSI means that the location of the tag cannot be resolved very precisely and, in fact, with RF it may choose the wrong room.
Q. But this sentence isn't talking about precision. It is just saying that the use of ID Tags that transmit by means of RF enables multiple receivers of different rooms to receive a given tag transmission and enable Radianse to determine the location of the tag by means of RSSI. All that's true, isn't it?
A. I would -- if you take the word "location" to mean location of the receiver closest to the transmitter, yes.
Q. And next sentence says, "Such technology cannot

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be used where the tags transmit only IR signals." Is that true?
A. Actually, that is not strictly true. You could certainly envision a system where you use the received signal strength of an IR signal to try to emulate a position within a room.
Q. It talks about multiple receivers in different

rooms receiving a given tag transmission?
A. Such a technology would not work through walls. But the idea of using RSSI strength would work perfectly well with IR, within a room.
Q. As long as the signal could be received by the receiver?
A. Yes.
Q. In your paragraph 16, in your report, you say, "The IR component of the Radianse IPS is set up to avoid receiving overlapping IR transmissions." What do you mean by that? There is only one receiver, isn't there, and it has one box?
A. What I meant by that, I believe, was that -- was speculation, but I believe they only put one receiver in a room and so they don't get overlapping IR signals.
Q. But you don't really have knowledge as to how they do that? If there is a big room, a hundred feet

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long, they might put more than one receiver?
A. And then a transmission in the middle of the room would give two receivers both an IR and RF component, and then they would have to depend on RSSI to decide which one was closer.
Q. But you don't really know how they deploy their receivers, as you have said before?
A. As I said before, they can deploy it a number of ways. I don't know if they have used all the ways or not.
Q. Let's go to paragraph 17 of the statement of facts. The first sentence, "Radianse's receivers are not sited so that the signal from a tag is received by only one receiver," is that true or false, or do you have any knowledge? Can you answer that?
A. I can speculate and say, once again, I believe for the system to work best they would put one receiver per room, and then the IR signal would be received by only one receiver.
Q. That's operating the whole thing as an IR system, essentially?
A. No, I don't believe that statement.
Q. Okay. But you don't know how they site their receivers, correct?

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A. No. That would be a way to site them. They have

many different choices of siting.
Q. And if the receivers are sited so that a tag is received by signals, received by only one receiver, then you wouldn't have the ability to use RSSI, correct?
A. I would have to go back and consult the location resolver algorithm. I believe that if the current RF -- if the current signal has an RF component but no IR component, and the previous location had an RF component but no IR component, it may not update the location if the new RSSI is weaker than the old.
But I would have to review the algorithm to be sure there was some logic in there that did something similar.
Q. But RSSI provides better information when there is an overlap of receivers, doesn't it, just using the RSSI portion?
MR. LENNON: Objection to the form.
A. RSSI is more likely to be useful when you have an overlap. But it is not limited to that. Because the transmission of radio waves is affected on a moment-by-moment basis by moving objects in the environment, opening and closing doors.
It is quite possible for the RSSI received

at one receiver to be different from ten -- over ten-second cycle, even though the tag hasn't moved. And likewise, it is quite possible that a distant receiver will receive one transmission from a tag even though the tag hasn't moved any closer to it because someone opened a door, for instance.
So the location resolver algorithm uses RSSI even if you only deploy one receiver per room.
Q. Look at the next sentence, please. "By using RF transmissions from ID Tags containing the unique Tag ID and RSSI, the Radianse IPS is able to identify and locate tags that could not be identified and located by the use of IR transmissions from tags containing the unique Tag ID." Is that correct?
A. Certainly in the case of the IR tag being blocked by clothing or by some other intervening object, yes, that's true.
Q. The next sentence, "Radianse's system does not deploy its receivers such that one receiver is associated with each area, and does not use receivers that receive transmissions from assigned areas of a predetermined

size." Do you have any view about that statement?
A. The Radianse system does not have to rely on overlapping receivers. The Radianse system could

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certainly be deployed such that there was one receiver per room, even if there are multiple receivers for an area. In other words, overlapping receivers.
Q. Again, you don't know how they actually deploy their receiver?
A. Even if they deploy them in an overlapping fashion, each receiver will only receive signals from a given area, whose size is determined at installation. It is either a ten-meter radius or something less, because they occasionally go in and turn the volume down.
Q. The receiver can receive based upon its sensitivity?
A. That's correct.
Q. And the strength of the signal?
A. Yes. And that is definitely a predetermined area.
Q. Well, predetermined area may have a defined term in the patent. And you have already said you are not familiar with the file history?
A. I'm not familiar with anything but the patent language itself. I didn't read the history.
Q. The next sentence in the statement of facts says, this is number 18, "Signals from ID Tags are received to the limit of the noise floor of the environment and the

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Receiver." Do you understand that sentence?
A. Yes, yes, I do.
Q. And if so, do you think it is correct?
A. Yes, I believe that sentence is correct.
Q. Then it says, "Radianse does not use limited area and extended area receivers." Do you agree with that sentence?
A. No, I do not.
Q. Why don't you?
A. Because the IR receiver on a receiver assembly covers a limited area, and the RF receiver on a receiver assembly covers an extended area, where area has -- area and limited and extended are words that all have their usual meanings.
Q. Again, the terms limited area, extended area

receiver, assigned area, you understand them all to be specific words in the patent that may have specific definitions?
A. I am aware they may have additional constraints on their meaning because of the prosecution history of the patent, yes.
Q. The next paragraph says, this is paragraph 19, "Radianse Receivers transmit data packets to the Radianse Server on a regular, predetermined schedule."

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Now, that's correct every ten seconds except for those button pushes; isn't that right?
MR. LENNON: Objection to form.
A. I agree with the sentence and your addition, yes, they transmit every ten seconds unless the schedule is interrupted and reset by a button press.
Q. It says, "Receivers send a packet to the Server independent of whether or not the Receiver has received signals from the ID Tags." Now, that's correct, isn't it, also?
A. In the absence of any ID tags, the receiver will send a part B packet every ten seconds, yes.
Q. Then it says, "Transmission from a Receiver is independent of ID Tag transmission and Server operations." Is that correct?
A. I don't know what that means exactly. Certainly the content of the transmission depends very heavily on what ID tags have transmitted in that area.
Q. But the receiver doesn't wait to receive a tag transmission before it sends out its scheduled transmission?
A. No, because, as I described before, it has to continually reassure the server that it is still on line.
Q. And the receiver doesn't wait until the server

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asks it for information before sending information to the server?
A. That would be an inefficient use of network resources, yes.
Q. The next sentence, "Radianse's Receivers do not provide output resulting from or triggered by the receipt of a Tag transmission." Isn't that a correct statement?
A. No, that is not a correct statement. Their transmission, the content of their transmission always

depends on the receipt of tag transmissions. The schedule of their transmission can be affected by receipt of tag transmission if the tag has had a button pressed.
Q. When there is no button pressed the schedule is not affected, correct?
A. When no button has been pressed on any tag that it has heard from, only the content of the transmission is affected.
Q. Now, paragraph 20, tell me whether you disagree or agree with that.
A. I disagree with that.
Q. On what basis?
A. Well, the basis is stated in my declaration. I can reiterate it, probably not as well.
Q. Let's take a look at paragraph 20 of your

declaration.
A. Okay. As I read paragraph 20 it doesn't say anything about what the Radianse receiver does. It says that a person of ordinary skill would consider the processor recited in claim 1 of the '314 patent to be a structure that performs the function of, and it lists three functions. Yes.
Q. There is no statement there about Radianse. It says, "Additionally the CPU recited in the specification of the '314 patent performs the above reference processing functions," and it refers to the patent. So what you are doing in paragraph 20 is referring to the patent, as far as I can figure out. Is that correct?
A. Paragraph 20 of my declaration may not be written as well as I would have wished to write it. I believe the Radianse IPS does have a processor that records electrical signals which are representative of unique identifying codes, that would be the code processor and the receiver assembly.
It has two recording -- it has a processor that records the receiver, which determines that such electrical signals are representative of the unique identifying codes associated with said transmitters, which would be the Net 50 processor, and it has a

processor that determines in which of said areas the transmitter is located, because the server performs that function by receiving the packet and cross-referencing it

with the MySQL database.
So while I meant to disagree with all three of those claims, I seem to have left that sentence out of my statement number 20.
Q. Take a look at paragraph 21 of the statement of facts. The first sentence, "The Radianse Server does not scan receivers for information." That's correct, isn't it?
A. That's half of the first sentence.
Q. Yes. That part?
A. Depending on the meaning you assert, assign to the word "scan" that could be regarded as true.
Certainly Radianse receiver does not go out and ask -- the Radianse server does not go out and ask each receiver for its results every ten seconds.
Q. Let's look at the rest of the sentence, "the Receivers do not send packets in response to receiving a signal from an ID Tag."
A. And I disagree with that.
Q. It all depends upon what you mean by "in response to," right?

A. Certainly in the case of a button press the response is instantaneous, but in the case of a standard tag transmission the response is still fairly rapid. The technical term for this is store and forward. It is the way e-mail systems work.
Q. Isn't that signal from the ID tag in a non-button press situation being sent in response to a clock which is measuring the passage of time?
A. The clock is certainly the trigger for the store and forward mechanism, yes.
Q. The next sentence says, "the Radianse system pushes information so that the processor need not monitor the receiver." Is that correct?
A. Yes, that's correct.
Q. Next it says, "Radianse's system does not employ a controller to collect information packets from receivers." That's correct, isn't it?
A. No, I don't believe that's correct. Controller is a very generic term used to mean microprocessor, a processor. There is certainly such a processor in the server which is running the location resolver. And so I would have to disagree with that sentence.
Q. It doesn't have a controller that is separate

from the server, correct?

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A. No, the server is a multi-tasking computer and that is one of the controller functions it is performing.
Q. It doesn't have a controller that sits between the receiver and the server?
A. No.
Q. It says, the next sentence, "Receivers themselves transmit data, which is sent directly to the Server." That's the last sentence of paragraph 21. "Receivers themselves transmit data, which is sent directly to the Server," that's correct, isn't it?
A. Now that I read that sentence and go back to the previous sentence, the receiver assembly transmits data to the server. Now that I'm looking at the other sentence and actually reading my response to item number 21, I could also state that the previous sentence, the controller Radianse is talking about is, in fact, the Net 50 controller, because it does, in fact, collect information packets from other parts of the receiver.
Q. Take a look at paragraph 22. It says, "The Radianse Server does not accumulate with respect to each transmitter those areas in which receivers have determined that an electrical signal is representative of the unique identifying code associated with that particular transmitter." Is that correct?

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A. I don't believe it to be entirely correct. The Radianse server certainly accumulates historical data so that it knows whether or not a new signal should be counted or the previous location retained, so it does, in fact, accumulate that history in the location data.
Q. What about 23, where it says, "The Radianse Server does not accumulate a badge count for each accumulated area"?
A. The server, the way it is configured right now, it only counts up to one or two. It doesn't count any higher. It really cares only if it has seen it at least once or not.
Q. So it doesn't accumulate a badge count as set forth in the '314 patent?
MR. LENNON: Objection to form.
Q. Correct?
A. I would have to read the '314 patent to tell

that.
Q. Do you want to take a look at it?
A. It is going to take a long time to read the patent.
Q. Have you found it yet?
A. Just got it.
Q. Should be in there somewhere. It is Number 6.

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There is a Figure 6A and 6B, are basically flow charts, particularly 6B related to the badge count. And that's described pretty much in columns 8, 9 and 10, it looks like, where it is talking about this process of accumulating a badge count.
Having looked at that, does the Radianse IPS work in that way?
MR. LENNON: Objection to form. You can answer.
Q. As described in the '314 patent about accumulating badge count?
A. The Radianse system does not implement the algorithm given in this flow chart.
Q. Take a look at paragraph 25 of the statement of facts. It says, "Receivers communicate with the Server using a fixed protocol." Is that correct as to the Radianse system?
A. The phrase "fixed protocol" has no technical meaning in any of my areas of expertise. I would have to say I would have to disagree with that sentence.
Q. You don't know what he means; is that right?
A. Yes.
Q. The next sentence says, "Data from the Receiver is always sent in the same format," is that true?

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A. The data from the receiver is always sent in a known format. The actual length of the data sent varies from transmission to transmission. And the content that is sent varies from transmission to transmission.
So same format, once again, can mean different things to different people.
Q. It says, the rest of the sentence says, "sent in the same format and is sent in its entirety so there is no need to identify what data is being sent." Is that correct?
MR. LENNON: Objection to form.

A. I have trouble understanding what it would mean to send it in less than its entirety or what it would mean to have to identify what data is being sent if it wasn't being sent.
Q. Okay. Now, the next sentence says, "Radianse does not use a variable-based protocol that implements object identifier variables." We have already talked about that?
A. Yes.
Q. And tell me again, is that correct or not as you understand that sentence?
A. I do not believe that statement is correct because I do believe they transmit object identifiers

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across the network, and the rest of those words don't mean a lot.
Q. The next sentence says, "The Radianse Server does not employ a Management Information Base (MIB) in which variables are assigned to information to be communicated and new variables are assigned when additional information needs to be conveyed." Is that correct?
A. Yes.
Q. The next sentence says, "With the Radianse system, there is no provision for getting or sending variables over the network using object identifiers." Is that right?
A. In the Radianse system the identifiers of objects are transmitted over the network. There is no provision for sending the variables back to the receivers, for instance.
Q. The next sentence says, "In contrast, Radianse sends all the information available from a device with each transmission from that device." First of all, forget about the "in contrast" language. Is it correct that Radianse sends all information available from a device with each transmission from the device?
MR. LENNON: Objection to form. You can answer.

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A. The data format the receiver assembly uses to transmit to the server does, in fact, transmit everything it knows about each ID tag, with each transmission.
Q. Then it says, the next sentence says, "No object identifiers are required, since the sequence is always

the same and the data elements are always of the same length." Is that true?

MR. LENNON: Same objection.

A. In the packet transmitted by the receiver, the data for each tag includes the object identifier of the tag, the unique ID. So the identifier of an object is transmitted.

Q. The final sentence of that paragraph says, "Radianse does not use SNMP or anything like SNMP." Is that correct?

MR. LENNON: Objection to form.

A. Radianse does not use SNMP. Whether it is like SNMP, you would have to tell me what you thought "like SNMP" meant.

Q. Next paragraph, 26, of the statement of facts says, "Radianse's receivers connect directly to a computer network," is that correct?

A. Their receiver assemblies connect directly to a computer network, yes.

Q. It goes on, "and do not require or use an external device controller." Is that correct?

A. The Radianse system provides for external device controllers, but they are accessed by the server, rather than by the receivers.

Q. The next sentence says, paragraph 27, "Radianse's receivers do not have a converter for converting a transmitted light-based signal to an electrical signal." Is that correct or not?

A. I believe that's incorrect. They certainly somewhere turn an RF and an IR signal into electrical pulses that are processed by the PIC microprocessor.

Q. Paragraph 28 says, "Radianse's receivers do not have a validation circuit for processing said electrical signal to determine whether said electrical signals are representative of the unique identifying code associated with said transmitters." Do you believe that's correct or not?

MR. LENNON: Objection to form.

A. Radianse's receiver co-processor certainly constitutes such a validation circuit. The PIC microprocessor validates the electrical signal and confirms that it is a Radianse signal before continuing to process it.

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Q. Paragraph 29 says, "Radianse's IPS does not have concentrators."
A. I didn't respond to 29.
Q. Okay. The next one says, "Radianse's IPS does not have collectors."
A. I also did not respond to that.
Q. And interface circuitry, does Radianse's IPS have interface circuitry? You didn't respond to that?
A. Yes, I did. And it does have interface circuitry.
Q. What do you mean by interface circuitry?
MR. LENNON: Objection to form.
A. I can describe several kinds of interface circuitry I think it has, if you would like. For instance, the interfaces between the two processors in the receiver assembly as interface circuitry.
Q. If you take a look at column 8 of the '195 patent, at lines 26 through 33, 34, that I think is the only place in this patent where that is any reference to interface circuitry. Just read that.
A. Okay.
MR. LENNON: Are you saying the actual term "interface circuitry" appears here?
MR. REPPERT: Yes.

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THE WITNESS: Yes, it does, in line 31.
MR. REPPERT: It is the only place it appears.
BY MR. REPPERT:
Q. In that sense of interface circuitry, let's see what that means. It talks about the concentrator 104 which is implemented as an intelligent interface between the Arcnet or Ethernet network and the twisted pairs RS-485 subnetwork.
Then it says, "Similar to the controller circuitry illustrated in Figure 9, and it preferably includes a microcontroller, as well as interface circuitry for both of the networks," does that tell you what this patent means by interface circuitry?
A. Yes, it does. Thank you for refreshing my memory.
Q. What does it tell you as to what it means?
A. In the context of that paragraph, the interface circuitry in the Radianse system is, in fact, the serial

interface between the co-processor and the Net 50.
RS-485 is a serial standard, as is the
RS-232 that the PIC uses to communicate to the Net 50.
And the Net 50 provides the function of translating the
serial signals into a form suitable for the Ethernet

network.
MR. REPPERT: Give me a minute. I think I
may be done.
Yes, I think I'm finished. Thank you very
much for your time.
(Proceedings conclude at 12:18 p.m.)

INDEX

REPLACE THIS PAGE
WITH THE ERRATA SHEET
AFTER IT HAS BEEN
COMPLETED AND SIGNED
BY THE DEPONENT.

State of Delaware)
)
New Castle County)

CERTIFICATE OF REPORTER

I, Eleanor J. Schwandt, Registered Professional Reporter and Notary Public, do hereby certify that there came before me on the 9th day of February, 2006, the deponent herein, WALTER LEIPOLD, who was duly sworn by me and thereafter examined by counsel for the respective parties; that the questions asked of said deponent and the answers given were taken down by me in Stenotype notes and thereafter transcribed by use of computer-aided transcription and computer printer under my direction.

I further certify that the foregoing is a true and correct transcript of the testimony given at said examination of said witness.

I further certify that I am not counsel, attorney, or relative of either party, or otherwise interested in the event of this suit.

Eleanor J. Schwandt
Certification No. 125-RPR
(Expires January 31, 2008)

DATED:

PUBLICLY FILED VERSION

Exhibit B

III. STATEMENT OF MATERIAL FACTS AS TO WHICH THERE IS NO GENUINE ISSUE

A. FACTS RELATING TO NON-INFRINGEMENT

1. Radianse manufactures and sells the Radianse Indoor Positioning System (IPS). (Tessier Affidavit, ¶ 3).

2. The Radianse IPS accurately and continuously tracks the location of assets or people in virtually any indoor environment. The Radianse IPS is based on a proprietary technique developed by Radianse to identify and determine the location of objects indoors. The Radianse IPS is comprised of four parts – a small, inexpensive, battery-powered transmitter called an ID Tag, a receiving unit called a Receiver, a wired or wireless network, and application software. (Tessier Affidavit, ¶ 5).

3. ID Tags are small devices that transmit unique identification codes and status information by means of radio frequency (RF) transmissions. These ID tags are worn by individuals or attached to assets to be tracked. (Tessier Affidavit, ¶ 6).

4. RF transmissions have different physical properties and characteristics from transmissions that are "light based" such as IR transmissions. RF transmissions are of a different wavelength than IR transmissions. RF transmissions are not blocked by opaque objects such as walls. IR and other light based transmissions are blocked by opaque objects such as walls. (Tessier Affidavit, ¶ 7).

5. ID Tags using RF transmitters to transmit unique tag identifying codes are less expensive than ID Tags using IR transmitters, because they use less energy and consequently cause less drain on batteries. (Tessier Affidavit, ¶ 8).

6. Signals from the ID Tags are received by Receivers. Receivers are placed at various locations around a facility and connect directly to the facility's network.

Receivers process the signals received from the ID Tags then send the data to a PC running Radianse software. (Tessier Affidavit, ¶ 9).

7. The Radianse software contains a proprietary algorithm to identify and determine the location of ID Tags, which it then makes available through a web interface, sends to existing customer databases/applications, or sends on to other value-added applications via XML. (Tessier Affidavit, ¶ 10).

8. In the Radianse IPS, ID Tags are identified by signals that are transmitted in the form of RF packets that are sent as 80 bits of Manchester encoded data. In particular, each RF packet includes a 32 bit unique identification of the ID Tag. (Tessier Affidavit, ¶ 11).

9. In addition to providing unique identification information for the ID Tag, the RF signal transmitted by the ID Tag in the Radianse constitutes the primary information used by the Radianse IPS software to locate the ID Tag. (Tessier Affidavit, ¶ 12).

10. The ID Tags in the Radianse IPS do not transmit identification information by means of IR. (Tessier Affidavit, ¶ 13). The Radianse System does not generate a light based signal that includes a unique identifying code. (Sims Non-Infringement Report, ¶ 21).

11. The Radianse IPS does not determine the identification of ID Tags by means of IR transmissions. (Tessier Affidavit, ¶ 14).

12. The RF transmissions from ID Tags in the Radianse IPS are followed by the transmission of a short IR signature in standard industry format that does not contain identification information and that is not unique to Radianse. The IR signal can only be

received if a valid RF packet is received. The IR signal has no relevance or meaning by itself. (Tessier Affidavit, ¶ 15) (Sims Non-Infringement Report, ¶ 21).

13. The IR signal transmitted by the ID Tags in the Radianse IPS does not identify the ID Tag. (Tessier Affidavit, ¶ 16).

14. The RF transmissions from ID Tags in the Radianse IPS provide the primary means by which the locations of the ID Tags are calculated by Radianse. The IR signals transmitted by the Radianse ID Tags provide supplementary location information. (Tessier Affidavit, ¶ 17).

15. The Radianse IPS requires the RF signal to locate and identify ID Tags, but does not require the IR signal either to identify or locate ID Tags. (Tessier Affidavit, ¶ 18).

16. In the Radianse IPS, Receivers are deployed with overlapping areas of signal reception. RF transmissions from an ID Tag are received by multiple Receivers. The received strength (RSSI) from an ID Tag at a Receiver is proportional to the distance of the ID Tag from the Receiver. The RSSI value from an ID Tag is the primary means by which the locations of the ID Tags are determined by the Radianse system. (Tessier Affidavit, ¶ 19). The use of ID Tags that transmit the unique TAG ID by means of RF enable multiple receivers in different rooms to receive a given tag transmission and enable Radianse to determine the location of the tag by means of RSSI. Such technology cannot be used where the tags transmit only IR signals. (Tessier Affidavit, ¶ 20).

17. Radianse's receivers are not sited so that the signal from a tag is received by only one receiver; Radianse does not use "area detection." By using RF transmissions from ID Tags containing the unique Tag ID and RSSI, the Radianse IPS is able to

identify and locate tags that could not be identified and located by the use of IR transmissions from tags containing the unique Tag ID. (Tessier Affidavit, ¶ 21). Radianse's system does not deploy its receivers such that one receiver is associated with each area, and does not use receivers that receive transmissions from assigned areas of a predetermined size. (Sims Non-Infringement Report, ¶s 23, 37).

18. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver. Radianse does not use limited area and extended area receivers. Reception of Tag signals at a Receiver is not limited to an assigned area. (Tessier Affidavit, ¶ 22).

19. Radianse Receivers transmit data packets to the Radianse Server on a regular, pre-determined schedule. Receivers send a packet to the Server independent of whether or not the Receiver has received signals from ID Tags. Transmission from a Receiver is independent of ID Tag transmission and Server operations. Radianse's Receivers do not provide output resulting from or triggered by the receipt of a Tag transmission. (Tessier Affidavit, ¶ 23) (Sims Non-Infringement Report, ¶ 39).

20. Radianse's IPS does not have a processor that performs the functions of (1) recording electrical signals which are representative of unique identifying codes; (2) recording the receiver which determined that such electrical signals are representative of the unique identifying codes associated with said transmitters; or (3) determining in which of said areas said transmitters are located. (Tessier Affidavit, ¶ 24).

21. The Radianse Server does not scan Receivers for information and the Receivers do not send packets in response to receiving a signal from an ID Tag. Rather, the Radianse system pushes information so that the processor need not monitor the

receiver. Radianse's system does not employ a controller to collect information packets from Receivers. Receivers themselves transmit data, which is sent directly to the Server. (Tessier Affidavit, ¶ 25) (Sims Non-Infringement Report, ¶ 271).

22. The Radianse Server does not accumulate with respect to each transmitter those areas in which receivers have determined that an electrical signal is representative of the unique identifying code associated with that particular transmitter. (Tessier Affidavit, ¶ 26).

23. The Radianse Server does not accumulate a badge count for each accumulated area. (Tessier Affidavit, ¶ 27) (Sims Non-Infringement Report, ¶ 29).

24. The Radianse system does not maintain a count or record of the number of times a Receiver receives a signal from an ID Tag. (Tessier Affidavit, ¶ 28).

25. Receivers communicate with the Server using a fixed protocol. Data from the Receiver is always sent in the same format and is sent in its entirety so there is no need to identify what data is being sent. Radianse does not use a variable-based protocol that implements object identifier variables. The Radianse Server does not employ a Management Information Base (MIB) in which variables are assigned to information to be communicated and new variables are assigned when additional information needs to be conveyed. With the Radianse system, there is no provision for getting or sending variables over the network using object identifiers. In contrast, Radianse sends all the information available from a device with each transmission from that device. No object identifiers are required, since the sequence is always the same and the data elements are always of the same length. Radianse does not use SNMP or anything like SNMP. (Tessier Affidavit, ¶ 29) (Sims Non-Infringement Report, ¶ 49).

26. Radianse's receivers connect directly to a computer network and do not require or use an external device controller. (Tessier Affidavit, ¶ 30) (Sims Non-Infringement Report, ¶ 53, 57).

27. Radianse's receivers do not have a converter for converting a transmitted light-based signal to an electrical signal. (Tessier Affidavit, ¶ 31).

28. Radianse's receivers do not have a validation circuit for processing said electrical signal to determine whether said electrical signals are representative of the unique identifying code associated with said transmitters. (Tessier Affidavit, ¶ 32) (Sims Non-Infringement Report, ¶ 25).

29. Radianse's IPS does not have concentrators. (Tessier Affidavit, ¶ 33).

30. Radianse's IPS does not have collectors. (Tessier Affidavit, ¶ 34).

31. Radianse's IPS does not have interface circuitry. (Tessier Affidavit, ¶ 35).

32. Radianse's IPS does not use area detection packets. (Tessier Affidavit, ¶ 36).

33. Radianse's IPS does not generate extended area detection packets or limited area detection packets. (Tessier Affidavit, ¶ 37).

34. Radianse's IPS does not use extended area receivers or limited area receivers. (Tessier Affidavit, ¶ 38) (Sims Non-Infringement Report, ¶s 66, 68, 70, 72).

35. A comparison of the Radianse System to each asserted claim for the four patents at issue is set forth in Exhibit A. (Tessier Affidavit, ¶ 39).

CERTIFICATE OF SERVICE

I, Elena C. Norman, Esquire hereby certify that on March 7, 2006, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to the following counsel of record:

George Pazuniak, Esquire
Connolly Bove Lodge & Hutz LLP
The Nemours Building
1007 N. Orange Street
Wilmington, DE 19801

I further certify that on March 7, 2006, I caused a copy of the foregoing document to be served by hand delivery on the above-listed counsel of record.

YOUNG CONAWAY STARGATT & TAYLOR, LLP

Elena C. Norman (No. 4780)
The Brandywine Building
1000 West Street, 17th Floor
Wilmington, Delaware 19801
(302) 571-6600
enorman@ycst.com

Attorneys for Radianse, Inc.